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LANCASHIRE COUNTY COUNCIL.

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FIFTEENTH

ANNUAL REPORT

OF THE

County Medical Officer of Health

AND

School Medical Officer

FOR THE

YEAR ENDED 31ST DECEMBER, 1923.

PRESTON:
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Director of Education :

P. E. Meadon, M.A.

MEDICAL STAFF.

(Jointly with the Public Health Department).

County Medical Officer of Health and School Medical Officer:

J. J. Butterworth, M.D., Ch.B., D.P.H.

Chief Assistant County Medical Officers:

J. Ferguson, B.A., M.B., Ch.B., D.P.H.
R. H. W. Fisher, M.A., L.R.C.P., M.R.C.S., D.P.H.

Assistant County Medical Officers:

W. M. Ash, M.B., B.S., D.P.H. (Resigned August, 1923).
L. E. H. R. Barker, B.A., M.B., Ch.B., D.P.H.
R. J. Batty, B.Sc., M.B., Ch.B., D.P.H.
R. B. Berry, M.D., Ch.B., D.P.H. (Resigned August, 1923).
Elizabeth H. Brook, M.B., Ch.B., D.P.H.
E. R. Cooper, M.B., Ch.B., D.P.H.
Catherine L. Corbett, M.B., Ch.B., D.P.H.
Winniefred M. Gray, M.A., M.B., Ch.B., D.P.H.
F. Hall, M.B., Ch.B., D.P.H., B.L.
H. Holroyd, M.B., B.S., D.P.H.
Gladys H. Hutchinson, M.B., Ch.B.
J. R. Jagger, M.B., Ch.B., D.P.H.
E. H. Scholefield, M.A., M.B., Ch.B., L.R.C.P., M.R.C.S., D.P.H.
J. A. Tomb, M.B., Ch.B., D.P.H.
E. H. Walker, M.B., Ch.B., D.P.H. (Resigned July, 1923).
G. G. Wray, M.D., Ch.B., D.P.H
S. N. Wright, M.Sc., M.B., Ch.B., D.P.H.

Dental Surgeons:

A. Cleaver, L.D.S. (part-time). J. Kershaw, L.D.S., L.M.S.S.A.
E. V. Pollitt, L.D.S.

Ophthalmic Surgeons (part-time):

H. H. Bywater, M.D., Ch.B., F.R.C.S., D. Ch.O.
H. V. White, M.D., Ch.B.
J. L. Meynell, M.D., M.R.C.S., D.P.H.

School Nurses and Health Visitors:

Miss S. Beach
Mrs. M. R. Beckett
Mrs. A. Birchall
Miss A. Canton
Mrs. E. Chambers
Mrs. H. M. Dewhurst
Miss H. Dickinson
Miss M. G. Dickinson
Miss M. E. Evans
Miss A. E. Fry
Mrs. S. Gray
Miss F. M. Heseltine
Mrs. M. A. Hilton
Mrs. M. C. Hoey
Miss A. Holmes
Miss G. M. Hughes
Mrs. W. Hutchinson
Miss A. D. Irving
Miss M. Kennedy
Miss A. Kirkham
Miss M. Kirkpatrick
Miss E. Knowles
Miss E. M. Lawley
Miss C. E. Laycock
Miss V. Lydall
Miss A. Lynch
Miss E. Mares
Miss M. R. McLean
Mrs. A. McTaggart
Miss G. Menzies
Miss A. I. Murphy
Mrs. B. M. Palin
Miss D. H. Procter
Miss A. Reeves
Miss D. Rigby
Miss M. Robinson
Miss M. Rochell
Miss E. Shaw
Miss E. M. G. Sizer
Miss Alice Smith
Miss Amelia Smith
Miss M. Steele
Mrs. E. C. Stringer
Mrs. F. M. Tregarthen
Miss E. A. Walker
Miss A. Walters
Miss G. J. Wellard
Miss M. C. Williams
Miss S. E. Wright

Dental Nurses:

Miss E. Annett
Miss L. M. Hartley

LANCASHIRE

COUNTY COUNCIL

LANCASHIRE EDUCATION COMMITTEE.

SCHOOL MEDICAL SUB-COMMITTEE.

FIFTEENTH

ANNUAL REPORT
OF THE
COUNTY MEDICAL OFFICER OF HEALTH
AND
SCHOOL MEDICAL OFFICER,

For the Year ended 31st December, 1923.

The following Report on the work of the School Medical Service follows in its arrangement the lines laid down by the Board of Education.

The difficulties presented from an administrative point of view in the County of Lancaster have been detailed in previous reports. Many of the schools in the rural portions of the County are difficult of access and situated at a considerable distance from the nearest railway station. Some schools are distant from the nearest railway station as much as nine miles.

This factor determines to a considerable extent the amount of work carried out by the Assistant Medical Officers and Nurses, the method of its performance, and is not without influence on its quality.

The following table shows the distance of the schools from the nearest railway station :—

Under 1 Mile.	1-2 Miles.	2-3 Miles.	3-4 Miles.	4-5 Miles.	Over 5 Miles.
249	160	124	39	49	68

An improvement in the amount and quality of the work of the staff has followed inevitably upon the use of motor-cars by members of the staff.

During the year three Assistant Medical Officers resigned to assume other appointments :—

Dr. E. H. Walker resigned to take up the appointment of Medical Officer of Health, Stretford, in July, 1923.

Dr. R. B. Berry resigned to take up the appointment of Medical Officer of Health, City of Gloucester, in August, 1923.

Dr. W. M. Ash resigned to take up the appointment of Deputy Medical Officer of Health, Middlesex County Council, in August, 1923.

The loss of such highly-qualified and efficient Medical Officers is severe.

On June 1st, 1920, the staff consisted of two Chief Assistant Medical Officers and eighteen Assistant Medical Officers, one of whom devoted her whole time to the medical inspection of girls in Secondary Schools, leaving seventeen Medical Officers for duty in Elementary Schools and in the boys' side of Secondary and Continuation Schools, and for duties under the Maternity and Child Welfare, Public Health, and other Acts.

The reduction in the number of the staff, as shown above, has necessitated a re-organisation of the areas. Each Medical Officer has been obliged to assume responsibility for an increased number of schools, in addition to an increased amount of duty in connection with the Child Welfare Scheme. The amount of work allotted to the remaining Medical Officers was beyond their capacity to accomplish, and it was found necessary to deprive the areas around Rochdale and Bamber Bridge of all medical supervision, except in urgent matters. Even when this curtailment had been effected the supervision of the remainder of the County was only made possible by the use of motor cars.

CO-ORDINATION OF THE WORK OF THE SCHOOL MEDICAL SERVICE WITH THAT OF OTHER HEALTH SERVICES.

(*a*) Infant and Child Welfare.

The School Medical Service is fully co-ordinated with the work of the Education Committee and of the Public Health and Housing Committee.

The County Medical Officer of Health is also the School Medical Officer ; the Assistant Medical Officers of Health are also the Assistant School Medical Officers, and the School Nurses are also the Health Visitors. For administrative purposes, the School Medical Department of the Education Committee and the Maternity and Child Welfare Department of the Public Health Committee have been fused, and the work of the combined Department is carried out by one staff of officials. The advantages of this co-ordination are obvious. The child is under the continuous observation of one set of officials from birth until he or she leaves school. Indeed, the life of the child prior to birth is an object of the care of the combined Department. The same Medical Officer and Nurse who give advice and supervision to the expectant mother in her home or at the Child Welfare Centre, will subsequently care for the well-being of the infant at the Child Welfare Centre and in the home, and later look after the child during the period of school attendance.

(*b*) Nursery Schools.

There are no Nursery Schools in the Administrative County. The Babies' Class in many of the Infant Schools or Departments is administered on Nursery School lines, and attention is specially directed to nourishment and rest, fresh air, space, light, warmth, exercise, and movement, and to the training of the child in good personal habits of body and mind.

The following statement shows what is done in one of these classes :—

> The day starts with the individual health inspection of the infants by the Head Teacher, and special attention is given to their personal hygiene—use of handkerchief, oversight of washing where necessary, deep breathing exercises in the open air, and so forth. Attention is next directed to the hygienic condition of their environment—dusting of classroom, watering of plants, washing of plant saucers, dusters, dolls' clothes, arranging flowers, arranging chairs for lessons, and so forth.
>
> Nourishment is arranged for in the form of a mid-morning lunch consisting of cocoa and milk, or Glaxo, together with lunch brought from home by the individual children. A charge of a half-penny a day is made to the parents. In necessitous cases the charge is remitted.
>
> The children prepare tables for this lunch, table cloths are laid, cups and saucers arranged, and tables decorated with flowers. All children parade to wash under supervision before the meal, and take turns to wait at table, to clear away, and to wash up the dishes.
>
> Some young children are hurriedly sent off to school in the morning without breakfast, or without a sufficient or suitable breakfast, owing to the indifference or negligence of their parents.
>
> Many young children from homes where parental control and responsibility are lacking go to bed too late, and suffer from lack of sleep. Their growth and development suffer in consequence. During the afternoon provision is made in this school for rest and sleep, with educative preparations similar to those for the preparation of lunch. The children sleep on rugs or mats, or in certain instances in hammocks. Individual children who continually fail to sleep day after day rest during the sleep period in the recumbent position, being given some toy or picture book to occupy their attention.
>
> Due regard is paid to considerations of space, light, and fresh air. The children spend as much time in the open air in the playground as is permitted by the weather, periods of quiescence alternating with vigorous activity to ensure warmth and to promote a healthy circulation of the blood.
>
> By such means as these, the physical well-being of the children is assured, and at the same time habits of healthy living and personal hygiene are inculcated at the earliest age.

The Assistant County Medical Officer and Nurse in charge of the school where these principles are in operation assist by their medical knowledge and give all the help which they can.

The following is the Time Table followed in the Nursery Room of the Infants' Department of one of the Council Schools in the County. The ages of the children vary from three to four and a half years.

Programme for Nursery Room—Ages of Children 3—4½ Years.

Morning.

9-0	9-10	Undressing and greetings. First marking of Registers.
9-10	9-30	Collection of lunches. Use of handkerchief. Hymns. Prayer. Bible story.
9-30	9-35	Hygiene run.
9-35	9-55	Domestic activities— (*a*) Attention to flowers, plants, pots, &c. (*b*) Some children go round the yard with basket and pick up pieces of paper and rubbish. (*c*) Each child takes his own duster from the box—dusts his chair, table, portion of wall, &c. Dusters folded and put away.
9-55	10-0	Registers closed.
10-0	10-15	Hygiene run. Washing of hands. Preparation for lunch.
10-15	10-30	Lunch.
10-30	10-50	Recreation. Monitors clear tables, wash up, and sweep.
10-50	11-20	Poetry. Occupations.
11-20	11-30	Music. Rhythmic Exercises. Imitation Games.
11-30	11-45	Story. Dismissal. Dressing. Monitors help to prepare the room for rest period in the afternoon.

Afternoon.

1-45	2-0	Undressing and greetings. Free chat. Registration. Use of handkerchief. Examination of hands and faces. Registers closed.
2-0	2-15	Hygiene run. Rhymes and Sing-song.
2-15	3-15	Rest period. Girls take their own blankets, lie on their own mats—outer circle. Boys use inner circle. Children who do not sleep—those who stay in bed in the mornings and restless children—do pastime work in Class III. room (4½ to 5½ years), bead-threading, colouring, inset filling, &c. Teacher keeps record of number of children who sleep.
	3-15	Children who are asleep are wakened. Prepare for dismissal.
	3-30	Hymn. Prayer. Good-byes.

Head Teacher inspects lavatories before 9 a.m. and 2 p.m.

On cold, wet days during recreation period, children have free play with toys (in hall).

(*c*) The Care of Debilitated Children under School Age.

This is a direction in which, with a larger medical and nursing staff, it would be possible to do more valuable work in the prevention of disease than it is at present possible to do. A considerable amount of work is, however, being done already through the County Council's Maternity and Child Welfare Scheme. A large number of children between two and five years of age are brought for supervision or advice to the Child Welfare Centres, of which there are thirty-seven in operation. The number of these children so seen during the year was 2,463, and the number of attendances made by them was 11,738. In addition, a large number of these pre-school children are seen by the Health Visitors and School Nurses when they are visiting the homes of infants or of school children for other purposes. The total number of visits paidto homes during the year by the Nurses, either in their capacity of Health Visitor or of School Nurse, was 68,714.

Children under three years of age can be provided under the County Council's Maternity and Child Welfare Scheme with fresh milk or with dried milk, Virol, and cod-liver oil and malt, at cost price, less than cost price, or free when they are medically certified to require the extra nourishment. During the last financial year a sum of about £7,000 was actually spent on these children.

Crippled children are dealt with in the Ethel Hedley Orthopædic Hospital, Windermere, or in the Memorial Home for Crippled Children at Bamford, near Rochdale.

The Medical Officers and Nurses take pains to co-operate with various voluntary agencies and philanthropic individuals, and have been thus able to secure a considerable amount of help, financial and otherwise, for individual children.

Special attention is paid to the prevention of blindness. All cases of running eyes, however slight, occurring in infants must by law be reported to the County Medical Officer by the midwife in attendance. A nurse is at once sent, with instructions to undertake, if necessary, the actual nursing of these cases under the supervision of the family practitioner till the danger to eyesight is either past or till no further help can be given.

The following table shows the result of this system :—

OPHTHALMIA NEONATORUM.

Information regarding condition of Eyes, obtained by re-visits, after a lapse of from 2 to 26 months from date of first report.

	YEAR 1919.		YEAR 1920.		YEAR 1921.	
	All "Eye Cases.	Notified as Oph. Neon.	All "Eye Cases."	Notified as Oph. Neon.	All "Eye Cases."	Notified as Oph. Neon.
Total No. of "Eye Cases" reported to the Local Supervising Authority under the Midwives Act	447	...	665	...	436	...
Total No. of "Cases" notified as Ophthalmia Neonatorum ...	...	323	...	464	...	265
Information regarding condition of eyes after a lapse of from 2 to 26 months from date of first report :—						
Totally Blind	2	2	3	3	2	1
One Eye Blind	1	1	...	...	...	...
R. Blind—L. Keratitis	...	...	1	1	...	...
R. Blind—L. Nebula	1	1	1	1	...	...
L. Blind—R. Nebula	1	1	...	...	...	...
R. Blind—L. Normal	2	2	...	...	1	1
L. Blind—R. Normal	...	...	2	2	1	1
R. Nebula—L. Normal	1	1	3	3	1	1
L. Nebula—R. Normal	2	2	4	4	3	3
L. Large Opacity—R. Normal ...	1	1	...	...	...	...
R. Squint—L. Normal	...	...	2	2	...	...
L. Squint—R. Normal	...	...	3	1	...	...
R. Weak—L. Normal	...	...	1	1	1	1
L. Weak—R. Normal	...	...	1	1	...	...
Both Eyes Weak	5	4	10	9	3	2
Adherent Iris	...	...	1	1	...	...
Occasional Conjunctivitis ...	1	1	...	...	...	...
Marked Internal Squint	1	1	...	...	...	...
Slight Opacity (one eye) ...	3	1	1	1	...	...
Left Eye Defective	1	1	...	...	...	...
Miosis	1	...	...	...	...	...
Vision Unsatisfactory	1	1	1	...	...	...
Eye Discharging	5	3	1	...	...	...
Eyelids Inflamed	2	2	3	3	1	...
R. Squint, Eyes Discharging ...	...	...	1	1	...	...
R. Blind—L. Myopia	...	...	1	1	...	...
Corneal Opacity (both eyes) ...	...	...	1	1	...	...
L. Blind—R. Defective	...	...	1	...	1	1
L. Blepharitis—R. Normal ...	...	...	...	...	1	1
Blepharitis (both eyes)	...	...	...	...	1	...
R. Defective	...	...	...	...	1	...
Eyes—Normal	345	240	533	362	355	205
Children Deceased	31	26	67	51	50	37
Left District—No information, or still under treatment ...	40	32	23	15	14	11
	447	323	665	464	436	265

SCHOOL HYGIENE.

When an Assistant County Medical Officer visits a school he takes particular note of the hygienic conditions of the school. Any defects which he may find are reported by him to the County Medical Officer of Health and School Medical Officer, who transmits the reports to the Director of Education for necessary action through the Local Area Committee and the School Managers. The Director of Education submits a report each month to the School Medical Sub-Committee showing what action has been, or is being, taken with regard to such reports.

During the year the number of reports forwarded to the Director was ninety-five, of which at the end of the year sixty had already been fully dealt with. These reports cover a great variety of conditions—uncleanliness, over-crowding, insufficient lighting, heating or ventilation, defects in buildings, playgrounds, or sanitary arrangements, &c.

A great deal still remains to be done, and many schools and playgrounds fall below modern standards. Nevertheless, by this system, which works harmoniously, a considerable amount of improvement in the general sanitary condition of the schools is being gradually effected. Many other minor improvements are effected less formally by representations made on the spot to the Correspondent or Head Teacher during the visits of the Medical Officers to the schools.

CLEANLINESS.

One of the duties of the school is to teach and to require at all times cleanliness of person and clothing.

The example of clean schools, schoolrooms, corridors, cloakrooms, windows, closets, and playgrounds in time exercises its influence on the character and habits of the scholars.

The interior and surroundings of a school should, therefore, be kept as clean and tidy as a private house; the floors should be scrubbed and washed at very frequent intervals and the furnishings thoroughly dusted. Dust should be discouraged in every possible way; it is probable that much infectious disease is conveyed through the medium of dust.

The most satisfactory schools, generally speaking, are those newer modern schools whose construction facilitates cleanliness, and which have the services of a whole-time caretaker. In many schools the conditions of cleanliness are not satisfactory. These generally are the older schools, the construction of which makes cleanliness hard to attain, and where often the playgrounds with a surface of cinders fill the school with dust in dry weather and with dirt during wet weather. A large number of these schools, being small, have only part-time caretakers. The total number of full-time caretakers in the 689 Council and Voluntary Schools is 181.

In a number of schools the interior walls are not plastered, and the rough uneven surface of bricks and mortar affords a lodgment for dust and dirt, which is not swept away often enough. It is in the interests of the teachers themselves that their schools should be kept scrupulously clean, as the amount of disease and of consequent loss of attendance will thereby be diminished.

PLAYGROUNDS.

These in many schools are defective. Where the surfaces are of cinders or the like the playgrounds give rise to clouds of dust in summer and are semi-quagmires in wet weather. The door-mat quickly becomes saturated with moisture and mud, and the school becomes filthy at the first entrance of the scholars. The dried mud is distributed as dust on the furniture, and it is hard to keep clean person, clothing or books.

Some schools with satisfactory playgrounds and conditions are approached by a muddy or dusty lane.

The incidence of conjunctivitis in the scholars attending schools with dusty playgrounds is excessive. In the dry dusty months, every child in one school was found to have a slight inflammation or irritation of the eyes, due to the dust of the playground. The effect on the mucous membranes of the respiratory tract is similar. The children's hands and persons become dirty during playtime, and the result can be observed in their dirty books.

CLOAKROOM ACCOMMODATION.

This in many schools is defective, being inadequate in amount and unsatisfactory in quality. There is frequently no facility for drying the clothing of children who have come considerable distances to school on wet days. No child should be allowed to sit in school in wet clothes or with wet feet. Nevertheless, owing to the lack of means for drying or changing, many children sit in school with wet clothes and wet feet during the bad weather. During 1923 there were 286 days on which rain fell. Many children possess "sand" shoes which they wear in school upon certain occasions, *e.g.*, for gymnastics, dancing, and eurythmics, but they are unable to keep these at school owing to the lack of accommodation, and the shoes are not available, therefore, as a change during wet weather.

In this connection it is interesting to note that many of the infants examined during the winter were found to have cold feet. Cold and wet feet in infants are responsible for a great deal of preventable sickness and ill-health. The amount is reflected in the attendance registers during inclement weather.

SCHOOL BUILDINGS.

The classroom should be the unit in planning a school building. The newer schools are composed of a number of classrooms conveniently arranged, and are suitable for the purpose for which they are designed. Many of the older schools have evidently been designed as a whole school, and subsequently divided into a number of classrooms, whose shape, size, and arrangement are dependent on the shape and size of the building.

In the newer schools, generally speaking, lighting, heating, and ventilation are satisfactory. In some of the older schools these conditions are not satisfactory. Some teachers do not pay sufficient attention to ventilation. The trouble of opening and shutting windows is well repaid by increased alertness and attention in the scholars, apart altogether from the benefit to the health of the occupants of the room.

Every window and door in the school should be opened fully during the morning and afternoon breaks; after school, morning and afternoon; and when drill is being taken indoors. The flushing of the school with fresh air at each change of lessons would well repay the effort, and should never be omitted.

In some of the older schools where ventilation is difficult, an adequate supply of fresh air entails a draught, and proper ventilation calls for continuous personal supervision on the part of the teacher. Where the heating apparatus is unsatisfactory, the supply of fresh air is apt to be sacrificed in the endeavour to obtain warmth and comfort. In these circumstances, an adequate supply of fresh air can be secured in the following way:—

> Every half-hour work should be stopped, all doors and windows opened for two minutes, and arm exercises and deep-breathing exercises performed by the children standing in their places. In this manner during inclement weather the air of a classroom can be changed in two minutes without the surfaces becoming chilled.

In many schools there is no accommodation suitable for medical inspection, and makeshift arrangements have to be made which are often not very satisfactory. This defect is being remedied in new schools.

SANITARY ARRANGEMENTS.

These are frequently unsatisfactory. Generally speaking, however, the sanitary arrangements which exist are maintained in a satisfactory condition, and considerable time and attention are devoted to keeping them clean.

FACILITIES FOR WASHING AND DRINKING.

Lavatory accommodation and equipment are in some cases unsatisfactory and insufficient. Frequently no soap is available, and one or two towels have to serve for all the scholars in a school for a week. Sometimes no towel at all is available. Drinking vessels in most schools consist of one cup in each lavatory, and this cup is not always clean. This common drinking cup is liable to convey infectious disease from one child to another. In an attempt to avoid this mode of infection some teachers prohibit the use of a cup. In these circumstances, the children place the mouth to the tap to drink, and the tap itself serves as a vehicle for the spread of infection. Properly-designed drinking fountains might be provided in each department in sufficient numbers.

EQUIPMENT.

In some schools the equipment is not wholly satisfactory, the desks, forms and blackboards being of an obsolete and unsuitable type.

For the current year a sum of £2,000 has been set aside by the Education Committee for the replacement of long desks without backs in Infants' Departments, apart from the expenditure required for new furniture and for repairs.

The Committee's policy is the gradual replacement of obsolete types by dual desks and modern equipment. In schools which are used for meetings in the evenings and for other non-educational purposes, a special desk has been designed for seating both adults and children, and this has been supplied in a number of places.

PERSONAL HYGIENE.

The practice as apart from the theoretical teaching of personal hygiene is not satisfactory in many schools. Personal hygiene means the practice of habits that promote good health. Health education is fundamental and essential to health preservation. It is comparatively easy to teach and influence children, but very difficult to influence the habits of adults.

Cleanliness of person and surroundings should be one of the most important lessons which the child learns at school. Practice is better than precept.

It is useless to teach the child theoretically the value of cleanliness when in practice it is impossible for the child to attend school and keep clean, and when in practice uncleanliness of clothing and person is allowed to pass unnoticed, books in a dirty condition are retained in use, and lavatory and washing accommodation are inadequate or unsatisfactory.

In some schools the hygienic condition of the school and the practice of personal hygiene by the scholars are entirely satisfactory; in many others they are not satisfactory. The teaching of hygiene should aim at the inculcation in the children of a proper pride in the condition of their bodies; observance of the laws of health would then follow as a natural consequence.

The formation of regular habits in eating, drinking, and sleeping, and in the care of the excretory organs is essential.

The daily example of clean classrooms, open windows, and other hygienic conditions in school, makes a lasting impression on the childish mind long before the intelligence is sufficiently developed to appreciate a "hygiene lesson."

Inculcated by daily example the principles of hygiene and sanitation become second nature, and are applied as a matter of course in the home of the future citizen.

MEDICAL INSPECTION.

The area of the Administrative County of Lancaster for Elementary Education is 949,877 acres, and the population is 930,589.

The following table shows the number of Sanitary Districts :—

No. of Sanitary Districts in the whole County	121
No. of Medical Officers of Health in charge of same	115
No. of Sanitary Districts in Elementary Education Area	94
No. of Medical Officers of Health in charge of same	88

The following table shows the number of Schools, Departments, &c., on the 31st December, 1923 :—

No. of Council Schools	133	
No. of Non-provided Schools	556	
Total number of Schools	——	689
No. of Departments in Council Schools...	204	
No. of Departments in Non-provided Schools	748	
Total number of Departments	——	952
Accommodation		197,278
Average number on Roll		138,910
Average Attendance		120,776
No. of Half-timers		297
No. of Teachers (excluding Pupil Teachers and Student Teachers)		4,340

ARRANGEMENTS MADE AND METHODS ADOPTED FOR THE MEDICAL INSPECTION OF THE CHILDREN.

(1) *Inspection of Children.*

Three series of visits to each Elementary School are made in the course of a year :—

(*a*) An annual routine visit by the Assistant Medical Officer, at which is made a formal and systematic examination of all the children in the school who are required by the Code of the Board of Education to be examined. At this routine inspection the following classes of children are examined :—

(i.) " Entrants "— children aged three, four and five years.

(ii.) " Leavers "—children between twelve and thirteen years of age, and older children who have not previously been examined as " Leavers."

(iii.) " Intermediates "— children between eight and nine years of age.

(iv.) " Specials "—children of any other age who are specially presented for examination by the Teachers, School Attendance Officers, parents, &c., or who are selected by the Medical Officer or Nurse in a general survey of the school.

(v.) " Re-examinations "—children who at previous examinations were found to have defects, or to require further examination or observation.

At the routine inspection of a school the Medical Officer is assisted by a Nurse, who prepares the children for examination and inspects their persons and clothing for conditions of uncleanliness. The presence of the Head Teacher or Class Teachers is invited, and much valuable help and information are obtained from the teachers, whose co-operation is always sought.

(*b*) In addition to the annual routine inspection, a series of re-visits is made to each school. The number of re-visits depends on the time at the disposal of the Medical Officers, but it is desirable from the point of view of preventive medicine that these visits should be as frequent as possible if defects are to be discovered at the earliest possible moment and treatment or remedy procured without delay. Re-visits are considered to be not less important than the annual routine visit. The following classes of children are examined at these re-visits :—

(i.) " Re-examinations," as defined above.

(ii.) " Specials," as defined above.

In addition, at both the routine inspection and the re-visits the Medical Officer inspects the physical training of the children, and reports on the heating, lighting, ventilation, and sanitary conditions of the schools. At these re-visits the Medical Officer is not ordinarily accompanied by the Nurse.

(*c*) A further series of visits is also paid by the Nurses. At every visit to the school the nurse follows-up the work of the Medical Officer and ascertains whether the instructions of the latter in regard to treatment, &c., have been carried out. At her first annual visit a systematic examination of every child in the school is made for conditions of uncleanliness. At the subsequent visits those children are re-examined who were found to require either re-examination or observation.

In an area having the physical and geographical configuration of Lancashire, where distances are great, school numerous and scattered, and travelling facilities in large districts very restricted, it is impossible to visit the schools as often as is desirable for the highest efficiency.

The following tables show briefly the work done in the Elementary Schools by the Assistant County Medical Officers and Nurses during 1923 :—

ROUTINE MEDICAL INSPECTION OF ELEMENTARY SCHOOLS.

No. of Schools visited		549
No. of Departments visited		751
No. of " Entrants " examined—		
Boys	5,316	
Girls	5,137	
	———	10,453

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No. of "Leavers" examined—		
Boys	9,010	
Girls	8,755	
		17,765
No. of "Intermediates" examined—		
Boys	5,674	
Girls	5,692	
		11,366
No. of "Specials" examined—		
Boys	6,319	
Girls	6,184	
		12,503
No. of Children examined ("Entrants," "Leavers," "Intermediates," and "Specials")—		
Boys	26,319	
Girls	25,768	
		52,087
No. of Children re-examined		14,093
No. of parents interviewed as part of the systematic inspection		4,472
No. of Homes visited		181

The above table refers only to the work done at routine medical inspections.

The following table shows the work done by the Medical Officers at visits other than routine visits :—

No. of schools re-visited	506
No. of re-visits paid to schools	642
No. of children examined at re-visits	14,747
No. of children recommended for specific medical treatment	2,826
No. of parents interviewed at school	1,596
No. of homes visited	481

The following table shows the work done in Elementary Schools by the Nurses ; it does not include visits or work done when they accompanied the Medical Officers :—

No. of visits paid to schools	3,064
No. of children examined	149,851
No. of children verminous	6,307
No. of children with ringworm	705
No. of parents interviewed at school	1,473
No. of homes visited	9,507

The Board of Education's schedule of medical inspection has been generally followed, but on account of the reduction of staff owing to death and resignations, two areas were without the services of Medical Officers altogether, except for very urgent matters. The introduction of motor transport, however, enabled the remaining members of the staff to do more work than had been previously possible.

The complete fusion of the School Medical and Child Welfare Services made it possible to secure the earliest possible ascertainment of crippling defects. During the year 1919 a special survey of the whole Administrative County was undertaken by the Assistant Medical Officers for the purpose of ascertaining the number and condition of all the blind, deaf, mentally defective, physically defective, and epileptic children within the area. Every known source of information was tapped. During the year 1923 arrangements were made whereby in future the register of all special children will be kept up-to-date, and before the next Annual Report is written comprehensive arrangements for dealing with crippled children will be in operation.

The attitude of the teachers generally towards Medical Inspection is one of complete welcome and friendliness, and they offer willingly every facility in their power. In many schools, however, the work is carried out under considerable difficulties owing to the lack of suitable accommodation, and the routine of the school is necessarily disturbed because, for example, two classes have to be put into one classroom or a class has to be taken out of doors because there is no room for it inside during the medical inspection.

FINDINGS OF MEDICAL INSPECTION.

The following tables show the findings of the routine Medical Inspection.

The routine Medical Inspection is the formal and systematic inspection made annually of all the age groups prescribed by the Board of Education; the results of this inspection are shown in the following table: —

			ENTRANTS. (Ages 3, 4, and 5.)		INTERMEDIATES. (Age 8.)		LEAVERS. (Ages 12, 13, and 14.)	
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
	No. Examined		5316	5137	5674	5692	9010	8755
	Children having Defects		41·6	44·4	51·7	56·6	37·1	48·2
Mental Condition.	Dull and Backward	T	...	...	...	...	...	...
		O	0·2	0·2	1·4	0·6	1·0	0·8
	Feeble-minded	T	...	...	...	...	...	0·01
		O	0·04	0·05	0·4	0·2	0·3	0·2
	Imbeciles	T	...	...	...	...	0·02	...
		O	...	0·01	...	...	0·01	0·03
	Idiots	T	...	...	...	...	...	...
		O	...	...	...	...	...	...
	Malnutrition	T	0·02	0·03	0·03	0·1	0·1	0·04
		O	2·3	2·1	2·5	2·4	1·3	1·6
Uncleanliness.	Head	T	0·3	1·7	0·2	1·9	0·1	2·3
		O	2·4	13·8	1·8	16·6	1·1	16·3
	Body	T	0·04	0·09	0·05	0·1	0·05	0·1
		O	0·9	0·8	1·1	1·1	0·6	0·7
Skin.	Ringworm. Head	T	0·6	0·5	0·3	0·2	0·1	0·05
		O	0·07	0·05	0·1	0·03	0·03	0·1
	Ringworm. Body	T	0·09	0·03	0·1	0·1	0·1	0·03
		O	...	0·01	0·05	0·01	0·1	0·05
	Scabies	T	0·09	0·01	0·1	0·1	0·1	0·1
		O	0·02	...	...	0·01	...	...
	Impetigo	T	1·6	1·2	0·9	0·6	0·4	0·4
		O	0·2	0·1	0·2	0·1	0·1	0·1
	Other Diseases (Non-Tubercular)	T	0·5	0·5	0·4	0·6	0·3	0·6
		O	0·4	0·5	0·5	0·6	0·5	0·5
Eye Diseases.	Def. Vision	SP	0·3	0·1	4·6	5·8	4·2	5·3
		O	0·2	0·3	4·9	5·9	4·7	6·1
	Squint	T	1·4	1·1	0·7	0·5	0·3	0·2
		O	0·9	1·1	0·9	1·1	0·6	0·6
	Conjunctivitis	T	0·3	0·4	0·3	0·1	0·2	0·3
		O	0·1	0·1	0·1	0·2	0·2	0·1
	Blepharitis	T	0·7	0·5	0·4	0·4	0·4	0·5
		O	0·4	0·7	0·6	0·7	0·4	0·4
	Keratitis	T	...	0·01	0·03	0·05	0·04	0·02
		O	...	...	...	...	...	0·02
	Corneal Opacities	T	0·07	...	...	0·03	0·04	0·05
		O	0·1	0·1	0·15	0·2	0·2	0·3
	Corneal Ulcer	T	0·02	0·03	...	0·01	0·05	0·01
		O	...	0·01	...	...	0·02	0·01
Ear Diseases.	Def. Hearing	T	0·1	0·03	0·1	0·2	0·1	0·2
		O	0·2	0·1	0·7	0·7	0·7	0·8
	Otitis Media	T	0·5	0·5	0·6	0·6	0·6	0·7
		O	0·1	0·1	0·2	0·2	0·2	0·2
	Other Ear Diseases	T	0·2	0·3	0·3	0·6	0·5	0·5
		O	0·2	0·07	0·05	0·3	0·2	0·3
Nose and Throat.	Enlarged Tonsils	T	1·0	0·8	0·7	1·3	0·7	1·2
		O	5·3	5·6	5·1	6·3	3·8	5·6
	Adenoids	T	0·3	0·4	0·3	0·5	0·1	0·1
		O	0·9	1·1	0·9	0·6	0·4	0·4
	Enl. T. & A.	T	0·3	0·3	0·6	0·7	0·3	0·4
		O	1·1	1·6	1·4	1·3	0·8	0·9
	Enlarged Cervical Glands (Non-Tubercular)	T	0·02	0·03	0·1	0·01	0·1	0·04
		O	10·2	7·6	8·9	7·1	4·8	4·0

				Entrants. (Ages 3, 4, and 5.)		Inter-mediates. (Age 8.)		Leavers. (Ages 12, 13, and 14.)	
				Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
		Def. Speech	T	...	...	0·03	0·01	0·02	0·01
			O	0·9	0·2	1·1	0·5	0·5	0·2
Teeth.		Four or more Carious	T	6·8	6·2	10·9	11·1	4·9	5·4
			O	9·1	9·3	12·4	12·3	5·3	4·1
		Sepsis	T	0·7	0·6	0·9	0·8	0·2	0·2
			O	...	0·01	...	0·01	0·01	0·01
Heart and Circulation.		Organic	T	0·02	0·05	0·03	0·1	0·03	0·1
			O	0·3	0·3	0·5	0·6	0·7	0·6
		Functional	T	...	...	...	...	...	0·01
			O	0·7	0·5	1·5	1·0	1·1	1·2
		Anæmia	T	0·2	0·4	0·2	0·3	0·1	0·3
			O	0·6	0·4	0·5	0·6	0.4	0·7
Lungs.		Bronchitis	T	0·7	0·7	0·4	0·4	0·2	0·2
			O	2·5	2·2	1·5	1·1	0·8	0·5
		Other Non-T.B. Diseases	T	...	...	...	0·01	0·01	0·01
			O	0·02	...	0·03	...	0·04	0·02
Tuberculosis.	Pul-monary.	Definite	T	...	...	...	...	0·03	0·02
			O	...	...	...	...	0·02	...
		Suspected	T	0·02	0·03	0·01	0·01	0·04	0·1
			O	0·07	0·03	0·03	0·1	0·1	0·1
	Non-Pulmonary.	Glands	T	0·03	0·1	0·2	0·1	0·1	0·1
			O	0·1	0·05	0·03	0·1	0·1	0·2
		Spine	T	...	...	...	...	0·01	0·01
			O	...	...	0·01	...	0·05	0·02
		Hip	T	...	...	0·01	0·01	...	...
			O	0·02	...	0·03	...	0·02	...
		Other Bones and Joints	T	..	...	...	0·03	...	0·03
			O	0·02	...	0·01	0·01	0·02	0·02
		Skin	T	...	...	...	...	...	0·02
			O	...	...	...	...	...	...
Nervous System.		Epilepsy	T	0·02	...	...	...	0·04	0·04
			O	0·02	0·03	0·1	0·05	0·03	0·05
		Chorea	T	...	0·03	0·03	0·05	0·03	0·01
			O	0·03	...	0·01	0·01	0·05	0·04
		Infantile Paralysis	T	0·02	0·1	0·03	0·03	0·1	0·03
			O	0·07	0·03	0·1	0·01	0·2	0·2
		Rickets	T	0·02	0·1	...	...	...	...
			O	1·7	0·9	3·4	1·8	0·4	0·3
Deform-ities.		Spinal Curvature	T	...	...	0·03	0·05	0·1	0·05
			O	0·1	0·01	0·2	0·2	0·2	0·2
		Other Forms	T	0·07	0·1	0·1	0·1	0·1	0·1
			O	0·5	0·3	0·6	0·5	0·6	0·7
		Other Diseases or Defects	T	0·7	0·4	0·5	0·4	0·5	1·0
			O	0·7	0·8	0·9	1·1	1·5	2·4

The routine Medical Inspection also includes the re-examination of children who at a previous examination were found to have defects or to require further examination or observation. The number of these re-examinations was 14,093.

In addition, there are also examined carefully a group of children who are known as " Specials " ; these children do not fall within one of the prescribed age groups, but are specially presented as possibly having defects by Teachers, School Attendance Officers, parents, &c., or are picked out by the Medical Officer or Nurse in a general inspection of the school.

The following table shows the results of the examination of the " Specials " ; the figures are not shown as percentages, as in the preceding table :—

SPECIAL CASES.

				Boys.	Girls.
		No. Examined		6319	6184
		Children having Defects		3278	3715
Mental Condition.		Dull and Backward	T	1	...
			O	129	63
		Feeble-minded	T	1	...
			O	26	26
		Imbeciles	T	1	1
			O	2	...
		Idiots	T	...	...
			O	...	...
		Malnutrition	T	6	4
			O	231	278
Unclean-liness.		Head	T	36	110
			O	173	1336
		Body	T	10	13
			O	42	37
Skin.	Ring-worm.	Head	T	47	41
			O	10	5
		Body	T	13	2
			O	2	...
		Scabies	T	7	8
			O	...	...
		Impetigo	T	69	49
			O	16	13
		Other Diseases (Non-Tubercular)	T	40	36
			O	24	27
Eye Diseases.		Def. Vision	SP	298	343
			O	272	332
		Squint	T	67	56
			O	67	57
		Conjunctivitis	T	17	23
			O	6	6
		Blepharitis	T	45	50
			O	28	33
		Keratitis	T	5	4
			O	1	2
		Corneal Opacities	T	...	4
			O	9	15
		Corneal Ulcer	T	1	...
			O	1	3
Ear Diseases.		Def. Hearing	T	20	27
			O	45	38
		Otitis Media	T	50	38
			O	9	11
		Other Ear Diseases	T	24	24
			O	3	6
Nose and Throat.		Enlarged Tonsils	T	63	85
			O	301	329
		Adenoids	T	57	59
			O	64	52
		Enl. T. & A.	T	53	49
			O	52	82
		Enlarged Cervical Glands (Non-Tubercular)	T	6	8
			O	324	293
		Def. Speech	T	3	4
			O	71	31
Teeth.		Four or more Carious	T	401	389
			O	675	635
		Sepsis	T	26	17
			O	...	...
Head and Circulation.		Organic	T	1	4
			O	39	43
		Functional	T	...	...
			O	52	50
		Anæmia	T	29	48
			O	30	46
Lungs.		Bronchitis	T	31	36
			O	87	49
		Other Non-T.B. Diseases	T	2	3
			O	2	...
Tuberculosis.	Pul-monary.	Definite	T	2	...
			O	...	...
		Suspected	T	8	2
			O	19	16
	Non-Pulmonary.	Glands	T	20	12
			O	10	9
		Spine	T	1	...
			O	1	2
		Hip	T	1	1
			O	...	...
		Other Bones and Joints	T	1	2
			O	1	2
		Skin	T	2	3
			O	1	...
Nervous System.		Epilepsy	T	3	1
			O	8	5
		Chorea	T	7	3
			O	9	5
		Infantile Paralysis	T	6	4
			O	9	9
		Rickets	T	1	1
			O	47	30
Deform-ities.		Spinal Curvature	T	3	3
			O	5	6
		Other Forms	T	9	12
			O	35	25
		Other Diseases or Defects	T	57	56
			O	72	71

In the routine or age-group system of medical inspection, there is always the danger that this most important group of children, who are obviously ailing, may be examined when the pressure of time unduly hurries the Medical Officer ; these are the children who most require a thorough examination, and whose parents ought to be interviewed at some length.

REVIEW OF THE FINDINGS.

Uncleanliness.

In the past verminous conditions were widely prevalent, lousiness especially being met with in all classes of society, but within recent times (excluding the war period) these conditions have been in the main confined to limited social classes such as vagrants, gipsies, the occupants of common lodging-houses, and others living under conditions of dirt, squalor, and overcrowding. Verminous conditions are associated with lack of personal cleanliness, and their great diminution is an indication of the national improvement in personal and domestic cleanliness.

The extent of verminous conditions in school children depends on the following factors :—

(1) The home environment ; from some homes and from slum areas it is practically useless to expect clean children. The home environment is made up of three elements :—

- (*a*) The parents or guardians, and especially the woman head of the house. On this element depends very largely the cleanliness or otherwise of the home and of the children.
- (*b*) The physical condition of the house and of its surroundings. In slum areas and in dilapidated property it is almost impossible to keep a house reasonably clean.
- (*c*) The number of inhabitants ; overcrowding powerfully predisposes to verminous conditions.

(2) The school environment. Here are two main elements :—

- (*a*) The teachers. The amount of interest taken in the children and the amount of hygienic supervision undertaken by the teachers vary widely from school to school. The relation between physical health and mental health, and between physical progress and mental progress, is not yet fully appreciated by all teachers.
- (*b*) The physical condition of the school premises and playgrounds. The interior and surroundings of a school should be kept as clean and tidy as in a private house. The floors of the schools should be washed and scrubbed at frequent intervals, and the furnishings thoroughly dusted. The sanitary conveniences should be adequate and should be kept scrupulously clean, and there should be a plentiful supply of soap and clean towels.

The cloakroom accommodation is in many schools responsible for the spread of infection, because of its inadequacy and bad arrangement, and of the careless and haphazard way in which the children are allowed to deposit their caps and coats. Lice may crawl from infected clothes, hats, &c., to other articles in close proximity or contact.

(3) Children are very often in a worse condition after the holidays, when supervision has been temporarily absent.

(4) The presence of habitual offenders, who are a constant source of infection. The homes of these children are very often dirty, and their mothers are careless or slatternly. These cases come up regularly at every inspection. They form a considerable but diminishing number.

It cannot be too strongly emphasised that general measures against verminous conditions will become unnecessary when individual and family cleanliness becomes the rule in the community. The need is for more education and more instruction in health matters.

In the Administrative County a definition of cleanliness has never been laid down, because no standard can be defined except the absolute standard that a single nit constitutes a verminous condition. It has been left to the discretion of the individual Medical Officer or Nurse to decide in any given case whether the child shall be scheduled as verminous or not.

Generally speaking, only those cases showing live vermin or a " large " number of nits have been returned as unclean. The personal factor enters into this classification, as between one individual and another ; furthermore, the standard of any one observer tends unconsciously and automatically to become higher and more stringent. As the condition of cleanliness in any given class of children improves, so does the nurse stimulate them to further and still further effort, and unconsciously her own standard tends to become higher and more stringent.

For this reason statistics are misleading ; the standard has become higher year by year.

The concensus of opinion of the Assistant Medical Officers, Nurses, and Teachers is that conditions have steadily and progressively improved. There are no longer seen those cases that used to be quite frequent, where the head was one crawling matted mass of dirt and vermin, and children are now classified as verminous who in the beginning would not have been considered bad enough for inclusion in that category.

Before the war there was observed a steady diminution in the number of children who were classified as verminous. In the first year of medical inspection the percentage of girls classified as verminous was 39·5 of those aged twelve years, and 35·6 of those aged five years. These percentages fell steadily to 15·8 and 17·6 respectively in the year 1914. During the war medical and nursing supervision of the children practically lapsed owing to the absence of the staff on naval or military duty, and on the resumption of the work it was found that a considerable increase in verminous conditions had taken place. In 1921, the first year in which the medical and nursing staff may be considered to have attained its full strength, the percentages of verminous children amongst the children aged twelve years and five years were 20·6 and 16·6 respectively. The following table shows the position, expressed in percentages, in the last few years amongst the girls of the routine age groups :—

YEAR.	Aged 12 years.	Aged 8 years.	Aged 5 years.
1921	20·6	20·2	16·6
1922	22·6	22·3	15·8
1923	19·4	19·7	16·39

The time will shortly arrive when a standard of absolute cleanliness can be adopted. An enquiry on this basis was instituted during the year throughout one district of the County, every child in attendance at the Elementary Schools in the district being examined and classified. The district is predominantly mining and industrial, but has a large rural area surrounding the urban parts.

Five thousand children were examined in the most thorough manner possible, in eighteen schools, and the children were classified into six groups, according to the condition of cleanliness found.

For the purpose of this enquiry the children were classified in the following groups :—

(1) Absolutely free from all trace of vermin.

Children not absolutely free from all trace of vermin were grouped in one or other of the following classes.

(2) A few nits.
(3) A moderate number of nits.
(4) A large number of nits.
(5) Pediculi capitis.
(6) Pediculi corporis.

The examination was carried out in the most thorough manner possible, and the classification was strictly adhered to. For example, the possessor of one single nit would be classified in Group 2, and only those absolutely and entirely free from all trace of vermin included in Group 1.

Several schools have been examined in this way upon more than one occasion, and an improvement in the cleanliness of the children observed. Some schools have been examined for the purposes of this classification upon only one occasion. The findings given relate to the first (or only) inspection in each school.

The conclusions may be summarised as follows :—

(1) Boys are less verminous than girls ; this is most probably due to their shorter hair.

(2) Throughout the area girls of twelve years of age and girls of eight years show no difference in cleanliness.

Girls of twelve years absolutely free from all trace of vermin, 44 per cent.
Girls of eight years absolutely free from all trace of vermin, 43·9 per cent.

(3) Children are more verminous after a holiday, and less verminous when examined during, or at the end of, a term—an indication on the one hand of parental neglect, and on the other of the efficacy of the School Medical Service and of the influence of the school.

(4) The deterioration is greater after a long holiday than after a short one.

(5) Infants are more verminous than older children.

Percentage absolutely free from all trace of vermin :—

Boys (all ages), average 88·8 per cent. ; Infants, 86·5 per cent.
Girls (all ages), average 44·2 per cent ; Infants, 39·0 per cent.

Very striking variations are to be observed in individual schools. In one school only 7·1 per cent. of the girls of twelve years of age were clean. In another similar school 50 per cent. of the girls of twelve were clean, whilst 0 per cent. of the girls of eight years (many of them sisters of the clean girls) were free from vermin. The explanation is probably that the girls of eight are, as a rule, cleansed by their mothers or some other relative, whilst girls of twelve are left to attend to themselves.

The figures relating, in individual schools, to girls of eight years may be interpreted largely as an indication of the want of parental care and solicitude, and as a criterion of home conditions. The figures relating to the girls of twelve years are more largely a reflection of the tone of the school and the extent to which self-respect has been acquired by the older children.

In one district with a population of about 2,000 all the children attend one of two schools. The home conditions of all the children are similar, and the occupation, social, and economic position of their parents and the housing conditions are comparable. The findings in these two schools were :—

	No. 1 School.	No. 2 School.
Percentage absolutely free from all trace of vermin.		
Boys	89 per cent.	83·3 per cent.
Girls	37·5 per cent.	31·0 per cent.
Girls aged 12 years	34·4 per cent.	7·1 per cent.
Girls aged 8 years	26·3 per cent.	36·3 per cent.
Percentage with live lice in the hair.		
Boys	0·0 per cent.	2·2 per cent.
Girls	2·2 per cent.	4·0 per cent.

The figures for the area as a whole are as follows :—

Total number of boys and girls examined	5,000
Percentage absolutely free from all trace of vermin	65·3 per cent.
Maximum school	82·5 per cent.
Minimum school	54·9 per cent.

Number of boys examined in the area	2,332
Percentage absolutely free from all trace of vermin	90·05 per cent
Maximum school	98·0 per cent.
Minimum school	79·1 per cent.

Number of girls examined in the area	2,668
Percentage absolutely free from all trace of vermin	42·8 per cent.
Maximum school	68·1 per cent.
Minimum school	29·3 per cent.

Number of girls of twelve years of age examined	558
Percentage absolutely free from all trace of vermin	44·0 per cent.
Maximum school	64·5 per cent.
Minimum school	7·1 per cent.

Number of girls of eight years of age examined	310
Percentage absolutely free from all trace of vermin	43·9 per cent.
Maximum school	77·7 per cent.
Minimum school	0·0 per cent.

The following table summarises all the findings :—

Number of Children Examined.	Number absolutely free from all trace of vermin.	A few nits.	A moderate number of nits.	A large number of nits.	Pediculi Capitis.	Pediculi Corporis.
Boys (2,332)	2100	150	22	9	37	14
Girls (2,668)	1164	741	334	294	129	6
Girls aged 8 years (310) ...	133	79	42	38	17	1
Girls aged 12 years (558)...	248	174	56	61	17	2

Not only do verminous conditions tend to interfere with bodily and mental development by helping to cause malnutrition, ill-health, and loss of sleep, and by helping to prevent the development of self-respect, but it must be remembered that vermin play an important part in the spread of disease.

There has been a very noteworthy decline within the last few years in the number of children infected with scabies. Scabies is ordinarily a verminous condition associated with conditions of gross and habitual uncleanliness, and confined in the main to the lowest stratum of the population, but during the war years it was brought back by soldiers from the trenches and invaded a class of the population who would ordinarily be free from the danger of infection. From the middle of the war onwards there were a very large number of children infested with scabies, but that number has now been reduced to a small figure. The cause of scabies is a minute parasitic insect which burrows in the superficial layers of the skin and there lays its eggs, causing intense irritation and scratching. It is a very easily communicated condition, and it very frequently happens that if one member of a family becomes infested, all the remaining members who live in the same house become infested also.

The following table shows the number of exclusions from school on account of the disease since 1918 :—

1918	...	559 cases.
1919	...	412 ,,
1920	...	476 ,,
1921	...	194 ,,
1922	...	51 ,,
1923	...	85 ,,

Blepharitis and impetigo are frequently associated with conditions of uncleanliness, and the incidence of these diseases is a reflection of the conditions of the scholars and of their homes. Impetigo is contagious from one person to another.

THYROID ENLARGEMENT.

A considerable number of children are found with an enlarged thyroid gland. It is probable that in many cases this is almost a physiological phenomenon occurring at the age of puberty in girls. To determine some precise facts in regard to the frequency of and conditions associated with the enlargement of the gland an investigation is at present being carried out by the medical staff.

Dr. Ash, late Assistant County Medical Officer, made an investigation into a so-called epidemic of thyroid enlargement which occurred in part of his district—Littleborough and Wardle. The facts elicited are of interest, but Dr. Ash was unable to arrive at any satisfactory conclusion as to the cause; in fact, he doubted the existence of the so-called epidemic. Dr. Ash made investigations in the schools of the affected area and in the Wardle Cottage Homes. He examined 83 children from the Homes and 249 other children in the schools. The following statement shows the facts as discovered by Dr. Ash. " Slight " goitre means a goitre which is both palpable and obvious.

Of the 83 children in the Cottage Homes—

11 were suffering from slight thyroid enlargement,
16 were suffering from moderate thyroid enlargement, and
6 were suffering from marked thyroid enlargement.

This compares with the 249 others in which there were—

14 cases of slight thyroid enlargement,
10 cases of moderate thyroid enlargement, and
6 cases of marked thyroid enlargement.

The cases occurring in the Cottage Homes children were as follows:—

Cottage No. 1	4 cases.
Cottage No. 2	2 cases.
Cottage No. 5	4 cases.
Cottage No. 6	7 cases.
Cottage No. 7	2 cases.
Cottage No. 8	5 cases.
Cottage No. 9	2 cases.
Cottage No. 10	7 cases.
Total	33 cases.

Amongst the 249 others there was a total of 30 cases, counting all degrees.

Two separate families each showed three cases.

Four separate families each showed two cases; otherwise there was only one case from any one home.

The sex was as follows:—

Cottage Home Children.

Of 11 cases with slight enlargement, 7 were boys, 4 were girls.
Of 16 cases with moderate enlargement, 8 were boys, 8 were girls.
Of 6 cases with marked enlargement, 3 were boys, 3 were girls.

Not Cottage Home Children.

Of 14 cases with slight enlargement, 5 were boys, 9 were girls.,
Of 10 cases with moderate enlargement, 6 were boys, 4 were girls.
Of 6 cases with marked enlargement, 2 were boys, 4 were girls.

Ages.—These cases occurred in children of 5—14 years of age. Grouping them into two groups, (*a*) 5—9 years and (*b*) 10—14 years, the proportion of males to females in each was as follows (the moderate and marked cases are grouped together into one group):—

Cottage Home Children.

		Slight Cases.	Marked Cases.
Aged 5—9 years—	Boys	1	5
	Girls	4	9
Aged over 9 years—	Boys	3	2
	Girls	3	6

Not Cottage Home Children.

		Slight Cases.	Marked Cases.
Aged 5—9 years—	Boys	4	4
	Girls	3	1
Aged over 9 years—	Boys	2	4
	Girls	5	7

From these figures it appears that the female sex was more markedly affected over nine years, and the male sex under nine years; that is, of course, what one would expect, as puberty will account for many of these cases. The cause of the other cases not accounted for by puberty is a matter of some speculation.

ENLARGED TONSILS AND ADENOIDS.

Diseases and unhealthy conditions of the nose and throat are frequently encountered in the medical inspection of schools. Professor Sir William Osler has stated that there are more mouth breathers per acre in England than in any other country in the world. No doubt the English climate plays its part in the causation.

In this connection it is interesting to note that the incidence of the affection in the Administrative County compares favourably with that in other parts of the country.

The following table shows the incidence in the routine age groups of all cases, mild or severe, in the Administrative County in the past year. The figures include not only both mild and severe cases, but all varieties—enlarged tonsils, enlarged adenoids, and enlarged tonsils and adenoids.

Boys.

Aged 5 years	9·0 per cent.
Aged 8 years	9·0 per cent.
Aged 12 years	6·1 per cent.

Girls.

Aged 5 years	9·8 per cent.
Aged 8 years	10·7 per cent.
Aged 12 years	8·6 per cent.

Average percentage at all the routine ages :—

Boys ...	8·03 per cent.
Girls ...	9·7 per cent.

Average percentage of both sexes and of all the routine ages—8·86 per cent.

The percentage incidence of children found with disease of the nose and throat in nineteen of the largest representative areas in the Kingdom (including Lancashire) during the year 1922 was 12·8 per cent.

Of the above cases a large number require, for the moment at any rate, no specific surgical treatment; they require merely to be kept under observation or to receive general hygienic treatment such as breathing exercises or dental attention. Of the 8·86 per cent of children who had an abnormal condition of the lymphatic structures of the nose and throat, only 1·33 per cent. were recommended for operative treatment, whereas for England as a whole the percentage of children recommended for surgical procedures for enlarged tonsils and adenoids is 5.

Simple enlargement is not itself considered by the medical staff to be a sufficient reason for recommending operation, unless the enlargement is mechanically interfering with breathing or hearing. Operation is recommended only when there is either an actual obstruction to breathing or an impairment of hearing, or when the tissues themselves are so diseased as to be a source of danger or of ill-health to the patient.

The consequences of diseased and unhealthy tonsils and adenoid tissue are far-reaching and severe. The sum total of ill-health, impaired efficiency, and crippling is considerable. Some of the consequences may be briefly mentioned :—

(1) Nasal catarrh and obstruction, liability to colds, influenza, bronchitis, nasal disease.

(2) Deafness, ear discharges. Diseased tonsils are the most common cause of running ears, which in turn may cause brain abscess, meningitis and death.

(3) Sore throat, quinsy, susceptibility to infectious diseases, diphtheria, scarlet fever, &c., and tuberculosis.

(4) Enlarged glands in the neck, tubercular glands, and abscesses in the neck and elsewhere.

(5) Lowered mental capacity, dullness, spurious feeble-mindedness.

(6) Rheumatism, heart disease, St. Vitus' Dance.

(7) Decayed teeth, crowded and irregular teeth.

(8) Deformity of face, chest, lungs and spine. Impairment of general health and physique, liability to disease of the lungs and consumption through impaired physique and chest capacity.

Investigations into the causes and effects of this diseased condition of the nose and throat have been undertaken by two of the Assistant County Medical Officers, Dr. Batty and Dr. Ash. They are satisfied that in a large proportion of the children affected the disease can be prevented at the outset by relatively simple methods, provided that the active, intelligent co-operation of parents and teachers can be secured.

A number of factors combine to cause the condition, among which may be included infections of the mouth and nasal passages, neglect of personal hygiene, hereditary disposition, and climate. After acute infections like measles and scarlet fever there seems to be a special liability to the development of the condition.

The parents of affected children are advised as to the care and management of the children in the home by the Assistant Medical Officers and School Nurses.

In school much more might be done to prevent the condition from developing, or to cure the trouble at its beginning, by attention to the following points :—

1.—All children, and infants especially, should be required to have a handkerchief, and should be taught to use it intelligently.

2.—All infants should be taught to breathe through the nose, so that the practice of nasal respiration becomes habitual from the outset of school life.

3.—Hot stuffy classrooms favour the development of unhealthy tonsils and adenoid tissue, and conduce to the spread of infection, whereas an abundance of pure, fresh air is a preventive of great value. The individual class teacher has a duty to perform to the children under his or her care. Where the school building is old, or badly designed or badly ventilated, the teacher should secure an adequate supply of air by the means recommended in the section on School Hygiene.

4.—Breathing exercises are of the greatest importance, and should be practised in all schools several times a day. Breathing exercises should form part of the daily physical exercises in all schools and should be performed either in the open air or with wide open windows and doors, and in a proper manner. At the end of every period of study, every child should be instructed to stand up in its place and perform deep breathing and other exercises, with open windows and doors, for two minutes.

5.—Decayed and unhealthy teeth, abscesses, and gumboils should receive attention.

6.—The addition of cod liver oil to the diet of affected children has been found to exert a beneficial effect on the condition.

In carrying out breathing exercises, an important point (often neglected in school) is to pay particular attention to the expansion of the nostrils before commencing the inspiration. This is especially of importance in the case of children with a tendency to adenoids, in whom the nose often has a pinched appearance, and the nostrils are flabby and poorly deleloped. Finally, in this connection it may be stated that if all cases were treated persistently and intelligently on these commonsense lines at the outset, the majority would be cured, and the number of cases ultimately requiring surgical operation materially diminished.

TUBERCULOSIS.

The following table show the incidence, expressed in percentages, of the diseases among children examined in the leaving age groups during the ordinary routine inspection in 1923 :—

Pulmonary Tuberculosis.

	Boys.		Girls.	
Definite	0·05	0·19 per cent.	0·02	0·22 per cent.
Suspected ...	0·14		0·2	

Non-Pulmonary Tuberculosis.

	Boys.		Girls.	
Glands	0·2	1·2 per cent.	0·3	1·4 per cent.
Bones and Joints..	1·0		1·1	

The following table shows the incidence of the disease amongst the group of "Specials" :—

	Boys.	Girls.
No. examined ...	6,319	6,184

Pulmonary Tuberculosis.

	Boys.	Girls.
Definite	2	0
Suspected ...	27	18

Non-Pulmonary Tuberculosis.

	Boys.	Girls.
Glands	30	21
Bones, Joints and Skin	8	10

Having regard to the large percentage of children of school age and pre-school age who are infected with the tubercle bacillus the number of cases of clinical tuberculosis in an active and obvious form is exceedingly small.

According to Rosenau, the infant starts life with a clean bill ot health.

At 2 years of age 10 per cent. have been infected with tubercle bacillus.
At 4 years of age 25—30 per cent. have been infected with tubercle bacillus.
At 5 —10 years of age about 50 per cent. have been infected with tubercle bacillus.
At 15 years of age 60—70 per cent. have been infected with tubercle bacillus.

Comparing these figures with those preceding, it will be obvious that the human resistance to tuberculosis is considerable, and that most cases recover spontaneously. The balance between immunity and susceptibility to tuberculosis is, however, delicately adjusted. There is a very small margin of safety. The resistance to infection is lowered by any influence which tends to diminish the general health, *e.g.*, poverty, bad housing, overcrowding, poor food, lack of sunshine and fresh air, insufficient sleep and rest.

In childhood two diseases especially lower the resistance of the body to infection with the tubercle bacillus, namely, measles and whooping cough. These diseases are frequently succeeded by tuberculosis. They are not in themselves caused by the tubercle bacillus, but they lower the general resistance of the body to the ever-present infection. It is important that very great care and attention should be given to secure complete recovery from these diseases; the period of convalescence should be most carefully supervised, and any delay in complete recovery should cause definite anxiety. Many parents regard these diseases as trifling and treat them lightly. No child who is pale and debilitated after measles or whooping cough should be admitted to school until recovery is complete; the risk in doing so is both great and definite. Tuberculosis is easier to prevent than to cure. Much can be done in schools by enthusiastic teachers to inculcate both by precept and practice healthy habits of living.

SKIN DISEASE.

There has been a considerable and progressive decrease in the number of children who have been excluded from school on account of impetigo, as the following figures show :—

1919 ...	204	1922 ...	158
1920 ...	280	1923 ...	118
1921 ...	178		

On the other hand there has been a considerable increase in the number of exclusions from ringworm. The figures for the last five years are :—

1919 ...	117	1922 ...	75
1920 ...	144	1923 ...	241
1921 ...	65		

The practice in dealing with ringworm is to exclude till cured all cases of ringworm of the smooth skin, but to allow a child suffering from ringworm of the scalp to attend school provided that he or she is receiving proper treatment, and that he or she wears in school a cap with a washable lining. This practice, which when properly carried out is reasonably effective, is far from being ideal, but it has been adopted with the intention of preventing the serious loss of education which a tedious disease like ringworm of the scalp would otherwise entail.

VISION.

The following tables give the visual acuity, as determined by the Snellen test types, of the children belonging to the intermediate and leaving age groups. The determination of the visual acuity of "Entrants" is not practicable as a routine procedure :—

Boys.

Age.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8	5592	82·0	80·9	8·2	8·9	3·4	3·9	3·1	3·1	1·5	1·5	0·9	0·8	0·5	0·4	0·4	0·3
12	5254	84·3	83·5	5·7	6·3	3·2	3·1	2·7	3·0	1·6	1·2	1·1	1·2	0·8	0·7	0·6	0·8
13	2994	84·2	82·9	5·9	6·4	2·9	3·3	2·4	2·9	1·8	1·8	1·5	1·5	0·6	0·5	0·5	0·5
14	317	83·3	83·3	4·4	4·7	3·5	4·4	3·5	3·1	1·6	2·2	0·9	0·9	1·9	0·6	0·9	0·6

Girls.

Age.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8	5634	78·3	76·2	9·8	10·8	4·7	5·0	3·7	3·9	1·6	2·1	0·9	1·1	0·5	0·6	0·3	0·3
12	5186	81·4	80·1	7·3	7·9	3·8	3·9	3·2	3·1	1·4	1·9	1·5	1·3	0·8	0·7	0·6	0·8
13	2833	80·2	79·3	7·9	8·1	3·4	3·6	3·1	3·6	2·2	2·1	2·0	1·9	0·6	0·6	0·5	0·8
14	280	81·1	80·3	6·4	7·8	3·9	3·9	5·0	4·3	2·1	2·5	1·1	0·3	...	0·3	0·3	0·3

The detection and correction of visual defect in school children is a very important function of the School Medical Service, and in this County special attention is given to the eyes.

The tests for visual acuteness, as determined by the Snellen test types, are supplemented by an ophthalmoscopic examination without a mydriatic :

1.—In all children whose visual acuteness in either eye falls below $\frac{6}{9}$;

2.—In all children where with a visual acuteness of $\frac{6}{6}$ or $\frac{6}{9}$ there are present signs of eyestrain or an inflammatory condition, such as conjunctivitis, blepharitis, &c.

3.—In all children where the teachers think that defective eyesight exists, irrespective of the visual acuteness found.

4.—In all children who are wearing spectacles, so as to ensure, as far as possible, that the spectacles are suitable.

This examination, which requires a dark room, is most frequently carried out under considerable difficulties in the older schools, but the newer schools have made special provision for the purpose. Such a complete examination ensures that no child is needlessly sent either to a specialist or to a place of treatment.

Defective vision is a great handicap to the educational progress of the child and to its mental and physical development.

Errors of refraction are very common, and, if not corrected, may be the cause of headache, nervousness, biliousness (migraine), and a great variety of symptoms. Certain children whose vision appears to be normal when tested in the ordinary way with the Snellen test types, nevertheless suffer from a refractive error and show symptoms of eyestrain. Children who show symptoms of eyestrain, such as frequent headaches, watering eyes, scowling and wrinkling of the forehead, peering through half closed eyelids, "bilious attacks," twitching, inattention, holding the print too close to the eyes, and reddened or inflamed eyelids, are carefully examined by the Medical Officers, who test their refraction with the ophthalmoscope. Slight errors of refraction are very frequent.

Dr. Corbett, Assistant County Medical Officer for the County districts around Burnley, has made a careful retinoscopical examination of the eyes of 2,888 children. The children examined were children aged 11, 12, and 13 years who—

(*i*)—were unable to read $\frac{6}{6}$ with each eye, or
(*ii*)—made any complaint of trouble with the eyes ; or
(*iii*)—had been observed by parents or teachers to have trouble with the eyes.

The following table shows the result of this examination :—

No. examined	2,888	...	
Eyes with little or no error	997	34·5	per cent.
Eyes with long sight (hypermetropia and hypermetropic astigmatism)	1,434	49·6	,,
Eyes with short sight (myopia and myopic astigmatism)	208	7·2	,,
Eyes with mixed short and long sight	249	8·6	,,
Children with odd eyes	119	4·1	,,
Children who have obtained glasses	567	19·6	,,

Ear Disease and Hearing.

Nearly one per cent. of both boys and girls of the intermediate and leaver groups have disease of the middle ear, and about the same proportion have defective hearing. Amongst the "special" group out of 3,278 boys and 3,715 girls who were examined the numbers with defective hearing were 65 boys and 65 girls, and the numbers of those with disease of the middle ear were 59 boys and 49 girls.

Discharging ears are usually classified officially among the minor ailments, and are so regarded by the parents of most of the afflicted children. The serious nature of the consequences and complications, and the difficulty of obtaining skilled and persistent treatment for the cases which do not show obviously serious complications, justify one in refusing to consider them as minor afflictions.

Inflammation of the middle ear with suppuration is a menace both to the hearing and to the life of the child. The continued suppuration destroys essential parts of the delicate mechanism of hearing, while extension of the suppurative process may give rise to inflammation in the bones of the skull, mastoid disease, meningitis, abscess in the brain, and other serious or fatal complications. It has been estimated that about 3 per cent. of all chronic cases of discharging ears ultimately terminate in death.

Inflammation of the middle ear frequently follows one of the acute infectious diseases of childhood, *e.g.*, measles, whooping cough, scarlet fever, and diphtheria, by the extension of sepsis from the nasopharynx through the eustachian tube to the cavity of the middle ear. Most school children suffer at one time or another from one of these infectious diseases, but all do not develop complications in the middle ear. The determining factor in the causation is an unhealthy condition of the nose, throat, and mouth. Ninety-five per cent. of these children with discharging ears owe their condition directly or indirectly to diseased and unhealthy tonsils and adenoids, or to infective conditions of the mouth, the result frequently of decayed teeth.

Prompt and efficient treatment at the very commencement of the trouble is of extreme importance, otherwise the condition becomes chronic and the cure becomes a matter of greater difficulty. Generally speaking, skilled treatment is not promptly obtained for the reason that the serious nature of the disease is not recognised.

Where School Clinics have been established in the County and the treatment of middle ear disease is undertaken the routine is as follows :—Children are treated by the Medical Officers and Nurses on two days a week in the presence of the parent. The parent is not only advised as to home treatment, but it is demonstrated to her in detail by the Medical Officers and Nurses, and she is *taught* how to carry out treatment at home and encouraged to persist with regularity and the necessary frequency. Cases requiring surgical and hospital treatment are referred to the appropriate quarter. Much remains to be done ; in the first place middle ear disease should be *prevented*, for it is a preventable disease, and not allowed to develop and to become chronic.

The decline in the incidence of this serious and not infrequently fatal ear disease during the past fifteen years is due mainly to the greater attention now devoted to the treatment of diseased tonsils and adenoids and of carious teeth. More thorough and persistent attention to these unhealthy conditions of nose and throat on the part of parents and teachers, on the lines indicated under the heading "Tonsils and Adenoids," will lead to a further diminution in the incidence.

DENTAL DEFECT.

The number of children suffering from dental caries or from sepsis is very large indeed. As a working standard the dental condition of a child is noted, for the purpose of compiling the Board of Education's statistical table, only when it has four or more teeth decayed, or when there is evidence of dental sepsis, chiefly the so-called "gum boil."

The following table shows the percentage of children in the routine age groups who, last year, were so noted :—

	Boys.	Girls.
Entrants	16·6 ...	16·11
Intermediates	24·2 ...	24·21
Leavers	10·41 ...	9·71

Amongst the group of "Specials" out of 6,319 boys and 6,184 girls who were examined 1,102 boys and 1,041 girls had marked dental caries or sepsis.

It is to be remembered that these are the figures as ascertained by the doctors working without probe and mirror in the ordinary course of their medical inspections. The examination made by the dental officers working with probe and mirror is more searching, and reveals a far higher percentage. Of the children seen in one district by the School Dentist 44 per cent. had extensive dental caries (four or more teeth), and 91·6 per cent. of the children required treatment.

The prevention of dental caries is a very complex problem intimately associated with conditions of civilization. Valuable investigation work is being undertaken by the Medical Research Council and by other workers.

In the case of the individual child the formation of the temporary teeth begins about seven months before birth. The mother's health and habits during pregnancy, therefore, are a factor in determining whether the temporary set of teeth shall be strong and resistant, or weak and subject to decay. The beginning of the crown of the first permanent tooth (the six year old molar) is present in the baby's jaw at birth ; the crowns of most of the other permanent teeth are nearly completed by three years of age.

All conditions affecting the health, growth, and nutrition of the infant are reflected in the condition of the teeth and the development of the jaws. To ensure good, sound, well-enamelled permanent teeth the infant should be breast fed during the first nine months of its life, and the environment, habits, and diet of the nursing mother should be favourable. Thereafter the food and means of feeding should be such as to compel ample exercise for the mouth and jaws through babyhood and childhood.

The crowns of the permanent teeth having been enamelled by the time the child is three years of age, the process is finished and done with, and no subsequent procedure can remedy defects in their structure.

The spacing and occlusion of the teeth are in large part dependent on the growth and exercise of the developing jaw of the child.

Our present day diet, and especially the present day diet of young children, is unsuited to the development and maintenance of strong, healthy teeth in a sound healthy condition. The causes and origins of dental defect are, therefore, largely beyond the reach of the School Medical Service as such.

Educational propaganda has been carried out from time to time by interested bodies and persons with a view to obtaining a more suitable dietary for the children of the race. The Assistant County Medical Officers and Nurses advise parents from time to time with reference to the diet of children of school age and pre-school age. Economic circumstances and lifelong force of habit too often cause the parents to persist in providing an unsuitable diet for their children, namely, one containing excess of carbohydrate and deficient in protein and fat, and of a soft sloppy nature requiring little or no mastication. Proper mastication tends to preserve the teeth and develop the jaws. Some teachers have taken a great interest in the teeth of the children under their care, and have thoroughly instructed them in the care of the teeth, the necessity of a clean mouth, and in oral and dental hygiene in general.

Crippling Defects.

The following table shows the incidence of the principal crippling diseases among the children who were examined in the routine age groups :—

	Entrants.		Intermediates		Leavers.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Tuberculosis of Bones and Joints ...	0·04	—	0·06	0·05	0·1	0·1
Infantile Paralysis	0·09	0·13	0·13	0·04	0·3	0·23
Rickets	1·72	0·1	3·4	1·8	0·4	0·3
Spinal Curvature and other Deformities	0·67	0·41	0·93	0·85	1·0	1·05

In the group of " Specials " the following table shows the position :—

	Boys.	Girls.
No. Examined	6,319	6,184
Tuberculosis of Bones and Joints ...	5	7
Infantile Paralysis	15	13
Rickets	48	31
Spinal Curvature and other Deformities	52	46

During the later months of 1920 a complete census of all the crippled children within the area of the Lancashire Elementary Education Sub-Committee was made. This census revealed the existence of about 1,000 crippled children of Elementary School age. Of these cripples the deformity was due in 36 per cent. to various forms of paralysis, mainly to the infantile type ; in 14 per cent. to rickets ; and in 20 per cent. to tuberculosis of bones and joints.

At the time of writing this Report the Committee have under consideration a comprehensive scheme for dealing with crippled children, and it is hoped that it will be in full operation during the current year.

The incidence of these diseases is largely prior to school age and occurs between birth and five years of age.

Infantile paralysis or poliomyelitis is an acute infectious disease, which gives rise to an inflammation of certain portions of the spinal cord of the sufferer and a paralysis of the associated muscles. The onset of the disease is most frequently acute and severe, but not typical in character, and very often cases are not diagnosed or notified until paralysis has developed.

Tuberculosis of bones and joints is due to an infection of the part with the tubercle bacillus. The source of the infection is twofold—(1) a human consumptive, or (2) tuberculous milk from a tuberculous cow.

Bone tuberculosis in children is generally secondary to infection of the lymphatic glands of the chest, neck, or abdomen, and the portal of entry is either through the tonsils or intestines.

In a bacteriological examination of various cases of clinical tuberculosis made in Edinburgh it was found that in children under five years of age 78·4 per cent. of the cases were due to the bovine bacillus and 21·6 per cent. to the human bacillus.

Rickets accounts for the third largest group of cases. As a result of a diet deficient in certain essential elements, associated as a rule with defective hygienic conditions, lack of sunshine, and fresh air, the growing bones of the child become softened and deformed.

Rickets is not only a cause of obvious deformities, but it plays a very powerful part in producing poor bodily development and a lowered constitutional resistance to disease in later life.

The grosser manifestations of the disease are not now met with nearly as frequently as formerly, and for this improvement a considerable amount of the credit is due to the teaching given by Maternity and Child Welfare Medical Officers and Nurses in regard to personal hygiene and to dietary. In one large family in Area 27 all the other members of the family had marked deformities as the result of the disease, but the mother promised faithfully to obey the instructions of the Assistant County Medical Officer for the district in regard to the upbringing of her most recent baby, with the result that this was the only non-rickety child in her family.

RURAL AND URBAN SCHOOL CHILDREN.

The following statistical paper by Dr. Scholefield, Assistant County Medical Officer, gives the results of a comparison made between children attending urban and rural schools. The paper deals with the last five completed inspections before the war, and it is hoped that a similar comparison may be made when the material for a similar normal post-war period is available :—

> An attempt has been made to compare the results of examinations of rural and urban boys and girls during a period of five years at the ages of 5 and 12 years. Strictly speaking, the comparison is one, not of country and town children, but of children attending schools situated in rural and urban districts respectively. A school situated in a rural district, if near its border, often has amongst its scholars those who dwell in the neighbouring urban district and *vice versa* ; nor are the occupations of the inhabitants of a rural district in Lancashire necessarily of a rural character. In many rural districts there are factories and the like which tend to make the life of the inhabitants approximate to that of the dwellers in urban areas. Consequently one would expect the differences between the two groups of children to be less than would be found if one were to make a selection of typically urban and typically rural areas.
>
> The ages of 5 and 12 years have been selected in preference to " Entrants " (of ages 3, 4, and 5 years), and " Leavers " (of ages 12, 13, and 14 years), because there is less chance of repetition of examination and a greater likelihood of uniformity in the factors of the comparison before the War. Material, *e.g.*, children of 14 years attending Elementary Schools could not be assumed to be normal specimens of their class. They may have been kept at school at this age, for instance, because they were backward owing to mental or physical defect or for exactly the opposite reason that they were mentally alert and their parents were in easy circumstances. It must be borne in mind also that the examinations are not those of all children of the ages of 5 and 12 years, but only of those present at the time of the visit of the Medical Officer. Those children suffering from acute diseases are necessarily excluded from the comparison. The numbers examined during the five years were :—

Age 5.

	Urban.	Rural.
Boys	17,526 ...	4,514
Girls	16,961 ...	4,381

Age 12.

	Urban.	Rural.
Boys	22,885 ...	5,449
Girls	22,799 ...	5,177

> The method of comparison which has been used is that of calculating the percentages of children affected by various diseases or defects in the different groups ; then by subtraction the percentage excess in each disease is obtained, and this gives in each disease or defect the numbers of children that must be taken from each group in order to find a difference of one affected by the disease in question. For instance, a difference of 2 per cent. in verminous heads between urban and rural girls of 12 years would mean a difference of 2 in 100, or 1 in 50, *i.e.*, if the excess were in the urban girls it would mean that if 50 urban girls were compared with 50 rural girls there would be amongst the urban girls one more verminous head than amongst the rural girls. This, of course, does not state the actual incidence of the defect. It is only a comparison. The actual differences found in comparing urban boys with rural

boys and urban girls with rural girls at the respective ages of 5 and 12 years are very slight. Where the differences are less than 1 in 1,000 it has not been thought worth while to record them for, in that case, the difference between the two groups is so small as to be negligible, or the defect is so rare that a comparison might be misleading. Suppose that, for instance, 0·04 per cent. of urban children are affected by a disease which only attacks 0·02 per cent. of rural children, it is rather alarming to hear that the disease in question is twice as common in urban children as in rural children, although this statement is quite true ; but the consideration that the difference between the two groups is only 1 in 5,000 reduces the affair to its proper perspective. Under the headings urban boys, rural boys, &c., are given the defects in excess of those of the group with which a comparison is desired, together with the amounts in excess :—

Age 5.

Urban Boys.		Rural Boys.	
Under nourished	1 in 200	Enlarged tonsils...	1 in 115
Pediculosis capitis	1 in 208	Enlarged glands	1 in 476
Ringworm of head	1 in 555		
Pediculosis corporis	1 in 175		
Impetigo	1 in 222		
Adenoids...	1 in 345		
Very bad teeth ...	1 in 192		
Otitis media	1 in 175		
Wearing spectacles	1 in 345		
Squint	1 in 161		
Conjunctivitis	1 in 476		
Blepharitis	1 in 769		
Corneal opacities	1 in 714		
Infantile paralysis	1 in 666		
Pulmonary tuberculosis..	1 in 833		
Rickets	1 in 151		
Bronchitis	1 in 200		

Age 5.

Urban Girls.		Rural Girls.	
Under nourished	1 in 204	Enlarged tonsils	1 in 129
Pediculosis capitis	1 in 41	Adenoids...	1 in 526
Pediculosis corporis	1 in 115	Blepharitis	1 in 833
Impetigo	1 in 500	Valvular heart disease ...	1 in 909
Otitis media	1 in 555	Anæmia ...	1 in 370
Wearing spectacles	1 in 227		
Squint	1 in 227		
Corneal opacities	1 in 526		
Bronchitis	1 in 303		
Rickets	1 in 147		

Age 12.

Urban Boys.		Rural Boys.	
Under nourished	1 in 143	Enlarged tonsils	1 in 68
Ringworm of head	1 in 833	Enlarged glands	1 in 149
Pediculosis corporis	1 in 270	Very bad teeth ...	1 in 120
Wearing spectacles	1 in 416	Blepharitis	1 in 263
Squint	1 in 145	Valvular heart disease ...	1 in 294
Conjunctivitis	1 in 526	Infantile paralysis	1 in 666
Bronchitis	1 in 666		

Age 12.

Urban Girls.		Rural Girls.	
Under nourished	1 in 300	Stammerers	1 in 416
Pediculosis capitis	1 in 29	Ringworm of head	1 in 500
Impetigo	1 in 714	Enlarged tonsils	1 in 105
Adenoids...	1 in 588	Enlarged glands	1 in 94
Wearing spectacles	1 in 82	Conjunctivitis ...	1 in 769
Squint	1 in 526	Blepharitis	1 in 294
Valvular heart disease ...	1 in 833	Very bad teeth ...	1 in 769

An inspection of these results shows—

(1) That in the majority of defects the differences between urban and rural children in Lancashire are slight.

(2) That there appears to be a greater difference between urban 5 year olds and rural 5 year olds, than between urban 12 year olds and rural 12 year olds, the advantage being on the side of the rural child at the younger age.

(3) That certain defects appear constantly on one side or other at both ages and in both sexes. These defects on the urban side are undernourishment, pediculosis, wearing spectacles, and squint, and on the rural side enlarged tonsils.

It is difficult in some of these cases to explain the variations.

Under nourishment is most likely associated with general neglect on the part of parents. The only difference between the slums of the urban districts and the slums of large cities is one of size.

Pediculosis in excess in the towns may be partly due to the larger schools and the greater opportunities of contamination.

Wearing Spectacles is no doubt partly due to the greater facilities in urban districts for obtaining glasses, but the association with an increased amount of squint points to an increased incidence of defective vision in the towns.

Enlarged Tonsils are commoner amongst rural school children than amongst town children. Why this should be so is not clear. It cannot be altogether a sequence of catarrh, for bronchitis is commoner in town children. The question arises whether the operative treatment of enlarged tonsils has played any part in the reduction of the numbers in urban districts.

A comparison of the four groups of five year olds, viz., urban boys, rural boys, urban girls, and rural girls, has been made in the same way with the four corresponding groups of children of 12 years of age, and the defects or disorders greater than 0·1 per cent. (or 1 in 1,000) and common to the whole of the groups of 5 or 12 year olds are as follows :—

Defects in excess of 1—1,000
amongst all 5 year olds.

- Ringworm of head
- Impetigo
- Enlarged tonsils
- Adenoids
- Squint
- Bronchitis
- Rickets

Defects in excess of 1—1,000
amongst all 12 year olds.

- Otitis media
- Wearing spectacles
- Valvular heart disease
- Tuberculosis (all forms)

It is to be understood that the comparison has only been made between children of the same sex and the same class of school (urban or rural). There would seem to be, therefore, a definite increase during school life amongst all classes in otitis media, wearing of spectacles, valvular heart disease, and tuberculosis.

The increased wearing of spectacles is associated with a diminution in the incidence of squint.

The other three diseases, viz., otitis media, valvular heart disease, and tuberculosis, are the cause of much suffering, and their victims often become physical wrecks.

Every effort should, therefore, be made during school life to prevent the increase of these diseases.

The following tables show the actual figures and percentages from which the above paper was composed :—

Age 5.

No. of Children examined :—

Urban—		Rural—		Total—(Urban and Rural)	
Boys ...	17,526	Boys ...	4,514	Boys ...	22,040
Girls ...	16,961	Girls ...	4,381	Girls ...	21,342

Diseases.			Urban.				Rural.				Total—Urban and Rural.			
			No. affected.		Percentage affected.		No. affected.		Percentage affected.		No. affected.		Percentage affected.	
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
		Feeble-minded ...	14	14	·08	·08	2	1	·04	·02	16	15	·07	·07
		Under-Nourished	254	184	1·45	1·08	43	26	·95	·59	297	210	1·34	·98
		Stammerers	55	24	·31	·14	12	10	·26	·23	67	34	·30	·16
Skin Diseases.	Head.	Pediculosis	938	4678	5·35	27·58	220	1103	4·87	25·17	1158	5781	5·25	27·08
		Ringworm	253	179	1·44	1·05	57	45	1·26	1·02	310	224	1·40	1·05
	Body.	Pediculosis	177	299	1·01	1·76	20	39	·44	·89	197	338	·89	1·58
		Scabies	13	17	·07	·10	2	5	·04	·11	15	22	·06	·10
		Ringworm	32	17	·18	·10	9	7	·19	·16	41	24	·18	·11
		Impetigo	165	158	·94	·93	22	32	·49	·73	187	190	·84	·89
		Enlarged Tonsils	1423	1428	8·12	8·42	406	403	8·99	9·19	1829	1831	8·29	8·58
		Adenoids............	722	653	4·12	3·85	173	177	3·83	4·04	895	830	4·06	3·89
		Enlarged Glands	518	464	2·95	2·73	143	116	3·16	2·64	661	580	3·00	2·71
		Very bad Teeth...	2662	2251	15·18	13·27	662	580	14·66	13·24	3324	2831	15·08	13·26
		Otitis Media	175	138	·99	·81	19	28	·42	·63	194	166	·88	·77
	Eye Diseases.	Spectacles	160	199	·91	1·17	28	32	·62	·73	188	231	·85	1·08
		Squint	489	453	2·79	2·67	98	98	2·17	2·23	587	551	2·66	2·58
		Conjunctivitis ...	80	64	·45	·37	11	16	·24	·36	91	80	·41	·37
		Blepharitis	280	261	1·59	1·54	66	73	1·46	1·66	346	334	1·57	1·56
		Keratitis	18	17	·10	·10	4	6	·08	·13	22	23	·10	·10
		Corneal Opacities	59	75	·33	·44	9	11	·19	·25	68	86	·30	·40
		Corneal Ulcer ...	21	16	·12	·09	6	4	·13	·09	27	20	·12	·09
	Heart.	Valvular	84	79	·48	·46	25	25	·55	·57	109	104	·49	·48
		Anæmia	276	326	1·57	1·92	69	96	1·52	2·19	345	422	1·56	1·97
		Bronchitis	305	254	1·74	1·49	56	51	1·24	1·16	361	305	1·63	1·43
		Chorea...............	5	5	·02	·03	2	1	·04	·02	7	6	·03	·02
		Epilepsy	8	7	·04	·04	2	1	·04	·02	10	8	·04	·03
		Infantile Paralysis	38	23	·21	·13	3	5	·06	·11	41	28	·18	·13
	Tuberculosis.	Glandular	19	17	·10	·10	3	4	·06	·09	22	21	·10	·09
		Spine	4	1	·02	·005	...	1	...	·02	4	2	·02	·01
		Hip	1	2	·005	·01	1	...	·02	...	2	2	·01	·01
		Pulmonary	29	41	·16	·24	2	8	·04	·18	31	49	·14	·23
		Skin	...	1	...	·005	...	...	...	...	...	1	...	·005
		Rickets	776	479	4·42	2·82	170	94	3·76	2·14	946	573	4·27	2·68
		Scoliosis	17	21	·09	·12	2	7	·04	·16	19	28	·08	·13
		Other Diseases ...	382	258	2·18	1·52	130	73	2·89	1·66	512	331	2·32	1·55
		TOTALS	10452	13103	59·63	77·25	2477	3178	54·87	72·54	12929	16281	58·66	76·29

Age 12.

No. of Children examined :—

Urban—		Rural—		Total—(Urban and Rural)	
Boys ...	22,885	Boys ...	5,449	Boys ...	28,334
Girls ...	22,799	Girls ...	5,177	Girls ...	27,976

		Diseases.	Urban.				Rural.				Total—Urban and Rural.			
			No. affected.		Percentage affected.		No. affected.		Percentage affected.		No. affected.		Percentage affected.	
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
		Feeble-minded ...	56	33	·24	·14	9	4	·16	·07	65	37	·23	·13
		Under-Nourished	290	199	1·26	·87	31	28	·56	·54	321	227	1·13	·81
		Stammerers	165	43	·72	·17	37	22	·67	·42	202	65	·71	·23
Skin Diseases.	Head.	Pediculosis	529	7369	2·31	32·32	128	1498	2·34	28·93	657	8867	2·31	31·69
		Ringworm	80	43	·35	·18	13	20	·23	·38	93	63	·32	·22
	Body.	Pediculosis	137	253	·59	1·11	12	56	·22	1·08	149	309	·52	1·10
		Scabies	18	19	·07	·08	5	2	·09	·03	23	21	·08	·07
		Ringworm	12	13	·05	·05	3	1	·05	·02	15	14	·05	·05
		Impetigo	59	106	·25	·46	17	17	·31	·32	76	123	·26	·44
		Enlarged Tonsils	1480	1805	6·46	7·91	432	459	7·92	8·86	1912	2264	6·74	8·09
		Adenoids............	599	655	2·61	2·87	144	140	2·64	2·70	743	795	2·62	2·84
		Enlarged Glands	357	345	1·56	1·51	122	133	2·23	2·57	479	478	1·69	1·70
		Very bad Teeth...	3177	2952	13·88	12·94	802	677	14·71	13·07	3979	3629	14·04	12·97
		Otitis Media	260	254	1·13	1·11	63	58	1·15	1·12	323	312	1·14	1·11
Eye Diseases.		Spectacles	979	1531	4·27	6·71	220	285	4·03	5·50	1199	1816	4·23	6·49
		Squint	498	400	2·17	1·75	81	81	1·48	1·56	579	481	2·04	1·72
		Conjunctivitis ...	75	84	·33	·37	8	26	·14	·50	83	110	·29	·39
		Blepharitis	252	358	1·10	1·57	81	99	1·48	1·91	333	457	1·17	1·63
		Keratitis	16	17	·07	·07	3	4	·05	·07	19	21	·06	·07
		Corneal Opacities	97	136	·42	·59	20	30	·36	·57	117	166	·41	·59
		Corneal Ulcer ...	17	19	·07	·08	3	7	·05	·13	20	26	·07	·09
Heart.		Valvular	201	265	·87	1·16	66	54	1·21	1·04	267	319	·94	1·14
		Anæmia	254	423	1·11	1·85	56	99	1·02	1·91	310	522	1·09	1·86
		Bronchitis	122	91	·53	·39	21	20	·38	·38	143	111	·50	·39
		Chorea...............	5	18	·02	·07	2	2	·03	·03	7	20	·02	·07
		Epilepsy	6	12	·02	·05	4	3	·07	·05	10	15	·03	·05
		Infantile Paralysis	37	24	·16	·10	17	3	·31	·05	54	27	·19	·09
Tuberculosis.		Glandular	45	37	·19	·16	11	9	·20	·17	56	46	·19	·16
		Spine	10	7	·04	·03	1	...	·02	...	11	7	·03	·02
		Hip	7	9	·03	·04	3	3	·05	·05	10	12	·03	·04
		Pulmonary	95	82	·41	·36	20	14	·36	·27	115	96	·40	·34
		Skin	5	4	·02	·01	1	3	·02	·05	6	7	·02	·02
		Rickets	362	155	1·58	·68	92	38	1·68	·73	454	193	1·60	·69
		Scoliosis	38	89	·16	·39	11	25	·20	·48	49	114	·17	·40
		Other Diseases ...	586	538	2·56	2·36	142	158	2·60	3·05	728	696	2·57	2·48
		Totals	10926	18388	47·74	80·65	2681	4078	49·20	78·77	13607	22466	48·02	80·30

INFECTIOUS DISEASE.

Detection.

No administrative action against infectious disease can be successful without the earliest possible notification of the first cases which occur in a district.

The sources of information are :—

1.—Statutory notification, chiefly by private medical practitioners, to the Medical Officer of Health of the district, who sends weekly returns to the County Medical Officer of Health, who is also School Medical Officer.

Measles, German measles, whooping-cough, chicken-pox and mumps, frequent causes of interference with education, are not notifiable.

2.—Notification by Head Teachers. The Head Teachers at the present time inform the Local Medical Officer of Health of the occurrence of both notifiable and non-notifiable infectious diseases or illnesses of a suspicious nature. They also usually inform the Assistant County Medical Officers. This notification is made verbally, by letter, or on a special postcard provided for the purpose.

3.—Notification by School Attendance Officers. The School Attendance Officers also inform the Local Medical Officer of Health in the same ways as the teachers, and in addition send to him, to the County Medical Officer of Health, and to the Assistant County Medical Officer for the district, a weekly return on a specified form of the numbers of new cases of the diseases enumerated thereon. On this weekly return is a column headed " Remarks," in which the School Attendance Officer may draw attention to any noteworthy features, *e.g.*, an increase in the number of cases, or the desirability of an investigation by a member of the medical or nursing staff. These returns are of considerable value. In times of epidemic or emergency special reports are forwarded by the School Attendance Officer to the Assistant County Medical Officers and to the Local Medical Officer of Health.

4.—In the course of their daily duties the Assistant County Medical Officers and Nurses frequently discover cases of infectious disease in the schools, and deal with them and with contacts in the appropriate manner.

5.—In times of epidemic and under special circumstances special visits are paid to the schools by the Assistant County Medical Officers, and every child in the school is examined with a view to the detection of the prevalent disease.

PREVENTION OF SPREAD.

Of administrative procedures for the prevention of infectious disease, the more important are :—

(*a*) The closure of schools or of departments of schools.

(*b*) The exclusion of children suffering from, or showing symptoms suggestive of infectious disease, or who may, it is feared, develop disease after exposure to infection.

The following tables show the number of schools closed during the year :—

(1) By the Local Sanitary Authority (Article 57 of the Code).

Measles	88
Whooping-cough	24
Scarlet fever	3
Measles and chicken-pox	1
Chicken-pox	5
Measles, scarlet fever, and colds	2
Measles, diphtheria, scarlet fever, and colds	7
Diphtheria	3
Measles and mumps	1
Mumps	14
Mumps and scarlet fever	1
Scarlet fever and diphtheria	3
Chicken pox and influenza	2
Influenza	35
	189

(2) By the School Medical Officer (Article 45(*b*) of the Code).

Measles	3
Measles and mumps	1
Mumps	2
Whooping-cough and chicken-pox	1
Whooping-cough	1
Scarlet fever	2
Bronchitis	1
	11

Exclusions from School.

Article 53 (b) of the Code provides for the exclusion of individual children from school (1) on the ground that their exclusion is desirable to prevent the spread of disease, or (2) on the ground that their uncleanly or verminous condition is detrimental to the other scholars, or (3) on the ground that, owing to their state of health or their physical or mental defects, they are incapable of receiving proper benefit from the instruction in the school.

The exclusion of individual children, as distinct from closure of the whole school, is made by the Committee's own staff.

The exclusion by the Assistant County Medical Officers and Nurses is made on a special form in triplicate. One copy is sent to the Central Office for the approval and counter signature of the School Medical Officer ; another is left in the school as authorisation for the Head Teacher and School Attendance Officer ; and the third is retained by the Medical Officer or Nurse as a record. The exclusions are made for a specified period, and the children are re-examined at the end of the period, and either re-admitted as fit for school or excluded for such further period as may be necessary.

In the following table the number of children excluded under Article 53 (*b*) and the causes of exclusion are shown :—

District No.	Pediculosis.	Scabies.	Ringworm.	Impetigo.	Scarlet Fever.	Measles	Mumps.	Diphtheria.	Chicken Pox.	Phthisis	Bronchitis.	Whooping Cough.	Other Diseases	Totals.
1	15	22	66	18	...	...	...	...	5	...	2	...	51	179
2	2	2	31	4	...	...	...	...	5	...	...	...	27	71
3	...	2	30	5	...	51	...	...	...	...	...	...	10	98
4	6	12	27	10	1	...	...	...	6	...	...	...	7	69
5	...	2	...	2	...	...	...	...	...	...	...	...	4	8
6	...	...	3	2	...	1	7	...	5	...	4	...	7	29
7	...	...	...	...	...	...	...	...	...	...	...	...	19	19
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	2	...	17	13	...	...	...	...	...	...	...	...	4	36
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	2	...	...	...	...	...	...	...	...	...	1	3
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	...	...	...	...	...	...	...	...	...	...	1	1	2	4
14	...	15	1	6	...	...	...	...	...	...	1	...	45	68
15	...	...	7	4	5	...	...	...	...	...	...	1	13	30
16	2	6	4	11	3	...	1	...	30	...	1	71	28	157
18	...	1	1	3	...	...	26	...	...	...	...	...	6	37
19	...	2	...	1	...	...	...	...	...	1	...	...	24	28
20	...	1	...	...	...	...	...	...	...	...	...	...	2	3
21	...	...	...	...	...	...	...	3	4	1	...	...	24	32
22	3	...	2	4	5	...	...	...	1	...	3	...	9	27
23	...	...	5	...	...	...	...	...	...	1	1	...	15	22
24	...	...	3	4	...	...	...	...	...	1	1	...	7	16
25	...	5	14	1	...	...	...	...	...	1	...	2	89	112
26	...	2	9	...	3	...	...	...	...	...	...	...	7	21
27	...	...	2	1	...	...	...	...	...	...	...	...	2	5
28	...	...	...	...	...	2	...	...	3	...	8	1	105	119
29	1	2	2	9	41	24	61	...	24	...	5	5	81	255
30	2	9	7	...	1	...	1	2	...	6	1	1	35	65
31	...	1	2	15	...	3	...	...	...	...	...	...	15	36
32	3	...	2	1	...	...	1	...	...	...	...	...	3	10
33	...	1	4	4	...	...	2	...	...	...	...	...	5	16
35	...	...	...	...	...	...	...	1	1	1	...	...	7	10
Totals	36	85	241	118	59	81	99	6	84	12	28	82	654	1585

When a child has been excluded from school on the authority of the County Medical Officer in the manner described above, the attendance is not allowed to count for purposes of grant, but if the register is marked in the way prescribed by the Code the attendance may be reckoned in the computation of the average attendance for the purpose of determining the grading of the school, and, as a consequence, the Head Teacher's salary ; so that there is no conflict between the teachers' pecuniary interest and the interest of the pupils, as far as authorised exclusions are concerned. Authorised exclusions are not, however, made for a shorter period than a week, and, of course, many children are absent from school for whom it is administratively quite impossible to issue exclusion certificates.

FOLLOWING-UP.

The utmost importance is attached to the work of "following-up." It is conceived that the main justification for the existence of medical inspection in schools and of Maternity and Child Welfare Work is the development in the community of a health conscience. The development of a health conscience depends entirely on education. "Following-up" is, therefore, carried out with a view to increasing the knowledge and widening the intelligence of the people in health matters. The guiding principles, therefore, are education and prevention. The mere notification to a parent that a child has a defect is not regarded as "following-up."

At each visit of the Medical Officer to a school the parents of all children who have defects, or who require observation, are sent for ; the majority attend and are interviewed personally by the Medical Officer. At these interviews the nature of the defect, its relation to sound health in general, and the results of neglect on the one hand and of treatment on the other are pointed out, and the parent is advised as to the proper agency to seek, or the proper line of treatment to follow. In this way it is sought to obtain the intelligent co-operation of the parents, and the results have justified the time spent. Where it is impossible for the parents to attend at the school a visit to the home is paid by the Medical Officer or by the Nurse (more usually the latter), or a special letter is written to the parent. In the intervals between the Medical Officer's visits to a school the Nurse visits the homes and interviews the parents of all children for whom treatment has not been obtained as a result of the first interview. If necessary, parents are interviewed repeatedly until treatment is obtained. These interviews are always made as helpful to the parents as possible, and the Nurse gives whatever assistance is possible in carrying out the treatment.

This work is now very closely associated with that done by the Nurses in their capacity as Health Visitors. During the year the Nurses as School Nurses visited 9,507 homes, and also examined 149,851 children in the schools, in addition to the visits paid to and the work done in the schools when they assisted the Medical Officers at routine inspections. As Health Visitors the Nurses during the year paid 57,207 visits to homes.

Great help in the work of "following-up" is given by many teachers and School Attendance Officers. For example, in a district where no facilities were provided by the Authority, the Headmaster of one school made private arrangements for the treatment of defects of the eyes and teeth which had been discovered at the medical inspection of his school. He made a private arrangement with a local ophthalmic surgeon under which the latter treated school children as private patients at his own house at a greatly reduced fee ; he also made arrangements for a local optician to supply glasses according to the doctor's prescription at a low fixed charge. The fees for treatment and spectacles were advanced out of the school fund to the parents who undertook to repay by instalments the money advanced to them. A similar arrangement was made with a local dentist for the treatment of teeth defects.

MEDICAL TREATMENT.

The methods employed and available for the treatment of the defects found naturally vary considerably in the different parts of the Administrative County.

There has been a considerable development in the last few years of the facilities for treatment provided by the Committee, and this development is steadily continuing. During the year a new School Clinic was opened at Westhoughton, and at the time of the writing of this report new clinics are about to be opened at Kearsley, Haydock, and Dalton-in-Furness, all the arrangements being practically complete.

It is, and always has been, the policy of the Committee that where parents can afford to pay for treatment privately they ought to do so, and it is the general practice of the medical staff to refer children with defects to their own private doctor in the first instance. Treatment is provided by the Committee only where the parents cannot afford it otherwise, or where the private doctor is for any reason unwilling or unable to undertake the treatment.

The following is a list of the School Clinics which are in actual operation, the kind of work which is undertaken in each being shown :—

Township.	Days and Times of Opening.		Nature of work undertaken.
Horwich	Monday	9-30 a.m. to 12 noon	Minor ailments
	Tuesday	9-30 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
	Wednesday	9-30 a.m. to 12 noon	Minor ailments
Little Lever	Thursday	9-30 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
Litherland	Monday	9 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
	Tuesday	10 a.m. to 12 noon	Minor ailments
	Wednesday	9 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
	Thursday	9-15 a.m. to 12-15 p.m.	Ophthalmic
		2 p.m. to 4 p.m.	Dental
	Friday	9 a.m. to 10 a.m.	Inspection
		10 a.m. to 12 noon	Minor ailments
		2 p.m. to 4 p.m.	Dental
Whitefield	Monday	9 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
		9 a.m. to 12 noon on alternate Mondays only	Ophthalmic
	Tuesday	9 a.m. to 10 a.m.	Inspection
		10 a.m. to 12 noon	Minor ailments
	Wednesday	9 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
	Friday	2 p.m. to 4 p.m.	Minor ailments
Ormskirk	Thursday (alternate)	10 a.m. to 12 noon	Minor ailments
	Friday	9 a.m. to 12 noon	Dental
Great Crosby	Tuesday	10 a.m. to 12-30 p.m.	Dental
	Thursday	10 a.m. to 12-30 p.m.	Dental
Leyland	Monday	9-30 a.m. to 12 noon	Minor ailments
	Wednesday (alternate)	9-30 a.m. to 12 noon	Ophthalmic
	Thursday	9-30 a.m. to 12 noon	Minor ailments
Prescot	Tuesday	10 a.m. to 12 noon	Inspection
Westhoughton	Monday	9 a.m. to 12 noon	Minor ailments
	Wednesday	2 p.m. to 4 p.m.	Minor ailments
	Thursday (alternate)	10 a.m. to 12 noon	Ophthalmic
Kearsley	Monday	10 a.m. to 12 noon on alternate Mondays only	Ophthalmic
		2 p.m. to 4 p.m. every Monday	Minor ailments
	Thursday	9 a.m. to 12 noon	Minor ailments
	Friday	9 a.m. to 12 noon, 2 p.m. to 4 p.m.	Dental
Haydock	Wednesday	10 a.m. to 12 noon	Minor ailments
	Friday	10 a.m. to 12 noon	Minor ailments

Arrangements have been made with the following Hospitals for the treatment of specified classes of defects :—

Ashton-under-Lyne Infirmary	Tonsils and adenoids, eye defects, X-ray treatment of ringworm
Blackburn Infirmary	Do. do.
Bolton Infirmary	Do. do.
Bury Infirmary	Do. do.
Preston Infirmary	Do. do.
Ormskirk Cottage Hospital	Tonsils and adenoids ; eye defects.
Ulverston Cottage Hospital	Tonsils and adenoids.
Wigan Infirmary	Do.
Ethel Hedley Orthopædic Hospital, Windermere	Crippling defects.
Home for Crippled Children, Bamford, near Rochdale	Do.

MINOR AILMENTS.

These consist of such defects as running ears, external eye diseases, skin diseases, &c. These are usually treated in the School Clinics, but in the Ormskirk Cottage Hospital a special arrangement has been made under which the Hospital acts as a School Clinic, the nursing being provided by the Hospital and the Assistant County Medical Officer for the district having the medical supervision.

The number of children for whom the treatment of minor ailments is available is 14,879.

TONSILS AND ADENOIDS.

The operative treatment of tonsils and adenoids is undertaken, under the Committee's Scheme, only in Hospitals, and in each case where an arrangement has been made the County Medical Officer has satisfied himself as to the special skill and experience of the Surgeon who performs the operation, and that adequate arrangements have been made to follow-up and re-examine these cases after the operation and to secure the necessary after-treatment.

It will thus be seen that the operation for the removal of tonsils and adenoids is no longer lightly regarded as a " minor " operation.

The number of children in average attendance in the schools of the districts for which this provision has been made is 79,428.

TUBERCULOSIS.

The treatment of tuberculosis is entirely in the hands of the Tuberculosis Committee, who have very extended facilities for the treatment of every type of the disease, and who deal promptly and effectively with every case brought to their notice.

VISION.

The treatment of defects of vision is undertaken either in the Eye Departments of General Hospitals or in the Eye Department of the Committee's own Clinics. In the former case it is undertaken by the Specialist Staff of the Hospital ; in the latter case by part-time visiting Specialists. Arrangements have been made with the following Hospitals :—Ashton-under-Lyne, Blackburn, Bolton, Bury, Preston, and Ormskirk. A visiting Specialist attends at the School Clinics in Litherland, Whitefield, Westhoughton, and Kearsley.

The number of children for whom Specialist eye treatment is available is 75,662.

Arrangements have also been made with certain firms of opticians, in connection with each Ophthalmic Clinic or Hospital, to supply spectacles at a low fixed charge. In necessitous cases the charge is reduced or remitted altogether.

Reference has been made in a preceding part of this Report to an arrangement made privately by a Headmaster for the treatment of eye defects. In another area a local charity has arranged for the treatment of visual defect in Elementary School children, and provides spectacles free of charge to every child requiring them.

DENTAL DEFECTS.

Dental treatment is provided in the Administrative County by one part-time and two whole-time Dental Surgeons, working in the Clinics at Horwich, Little Lever, Litherland, Whitefield, Ormskirk, Kearsley and Great Crosby. These Clinics serve schools with an average attendance of 13,160. Very few children in Elementary Schools obtain dental treatment privately. The importance of efficient dental treatment is not yet generally realised. Parents will travel long distances to obtain medical or surgical or ophthalmic treatment for their children, but they are not yet awake to the need for dental treatment.

The most important treatment is preventive. Much has been done in many of the schools to educate the children in the care of their teeth and to inculcate habits of cleanliness by tooth brush drill and parades, formation of White Ivory Leagues, and so forth. The excellent result in the children in these schools is very striking, but, unfortunately, there remain many schools in which not enough interest is shown in the care of the teeth. The Medical Officers and Nurses do what they can to educate the children, but their efforts in any given school are naturally intermittent, and to be thoroughly effective dental propaganda should be continuous and practical.

CRIPPLING DEFECTS AND ORTHOPÆDICS.

At the time of writing this Report a comprehensive scheme for dealing with crippled children is about to be put into operation, and it will be fully described in the next Annual Report. During the year under review there were available for children from the Administrative County fifteen beds in the Rochdale Crippled Children's Home and thirteen beds in the Ethel Hedley Orthopædic Hospital, Windermere.

The following table shows the number of children treated in these Hospitals during the year :—

	Rochdale Crippled Children's Home	Ethel Hedley Orth. Hospital.
Inmates on 1st January, 1923 ...	11	11
Admitted during the year	19	24
Discharged during the year ...	16	22
Died during the year	—	1

The following tables show clearly the character of the work done at these Institutions during the year 1923 :—

ROCHDALE CRIPPLED CHILDREN'S HOME.

Case No.	Date of Admission.	Date of Discharge.	Defect for which admitted.	Result of Treatment.
1	25/4/21	Still in	Club feet	Walking, but condition not yet perfect.
2	1/7/21	26/5/23	Not able to walk. Very bad Genu Valgum and deformity	Walking well with straight legs, but still supported by irons
3	29/7/21	Still in	T.B. Hip	Just commenced to walk.
4	25/11/21	27/1/23	Rickets	Walking well without irons, legs straight.
5	8/2/22	27/1/23	Rickets, Genu Varum	Walking well with straight legs supported by irons.
6	29/5/22	26/5/23	Genu Valgum (right)	Walking well with straight leg, supported by caliper splint.
7	15/6/22	31/3/23	Genu Valgum	Walking well without support, legs straight.
8	5/7/22	26/5/23	Enlarged Thyroid ? Cretinoid	Very much improved in general health.
9	7/11/22	14/7/23	Double Genu Valgum	Walking well with straight legs, supported by irons.
10	5/12/22	12/1/24	Genu Varum	Walking well with straight legs, supported by irons.
11	29/1/23	3/11/23	Genu Valgum (left)	Walking well without support, legs straight.
12	10/3/23	27/7/23	Spastic Paraplegia. A very bad case. Mentally deficient	Legs straightened, sent home in plaster.
13	13/4/23	8/3/24	Rickets, Genu Valgum	Walking well with straight legs, supported by irons.
14	13/4/23	8/3/24	Infantile Paralysis	Walking very much improved by properly adapted boots.
15	16/4/23	22/10/23	Genu Valgum	Walking well with straight legs, supported by irons.
16	16/4/23	26/1/24	Genu Valgum	Walking well with straight legs, supported by irons.

Case No.	Date of Admission.	Date of Discharge.	Defect for which admitted.	Result of Treatment.
17	16/4/23	12/1/24	Rickets	Quite well.
18	4/6/23	8/9/23	Genu Valgum	Quite well with leg straight.
19	7/6/23	13/10/23	General Debility, not able to walk	Went out walking, no deformity.
20	16/6/23	20/10/23	Rickets, could not walk	Sent home walking well, no deformity.
21	25/6/23	Still in	Club foot (right)	Foot almost straight.
22	14/9/23	Still in	Genu Valgum. Very bad	......
23	30/7/23	1/3/24	Genu Valgum	Walking well with straight legs. Sent home without irons.
24	17/9/23	Still in	Infantile Paralysis	......
25	25/10/23	8/12/23	Unable to walk properly	Walking well, no deformity
26	2/11/23	23/2/24	Genu Valgum	Walking well without irons, with straight legs.
27	3/11/23	15/3/24	Genu Valgum	Walking well without irons, with straight legs.
28	27/11/23	22/3/24	Rickets. Infantile Paralysis small group of muscles	Walking well with irons.

Ethel Hedley Orthopædic Hospital, Windermere.

Case No.	Date of Admission.	Date of Discharge.	Defect for which admitted.	Result of Treatment.
1	22/3/22	24/10/23	Congenital Dislocation of Hip (right)	Dislocation reduced. Walking well in plaster.
2	29/4/22	8/10/23	Poliomyelitis. Flexion-contractures	......
3	29/4/22	11/2/24	Poliomyelitis	Improved. Walking in calipers, but not satisfactory.
4	2/6/22	18/4/23	T.B. Knee	Disease quiescent. Satisfactory.
5	1/7/22	6/1/23	Spastic Paraplegia	Satisfactory. Walking better.
6	8/7/22	6/1/23	Poliomyelitis	Walking well in high boot.
7	11/8/22	6/1/23	Poliomyelitis	Very satisfactory. Walkin caliper.
8	11/8/22	28/2/23	Poliomyelitis	For re-admission and further treatment.
9	18/8/22	7/7/23	Poliomyelitis	For re-admission and further treatment.
10	12/9/22	2/4/23	Spastic Paraplegia	For re-admission and further treatment.

Case No.	Date of Admission.	Date of Discharge.	Defect for which admitted.	Result of Treatment.
11	2/12/22	14/2/23	Congenital Torticollis	Cured.
12	9/12/22	14/2/23	Congenital Dislocation of Hip (right)	Died 29/8/23.
13	13/1/23	14/2/23	Rickets	Discharged in splints.
14	18/1/23	22/9/23	Fractured Jaw	Satisfactory.
15	18/1/23	22/9/23	Spina Bifida. Left Club-foot	Spina Bifida cured; Club-foot still under treatment. Re-admitted 7/12/23. Discharged 14/12/23.
16	7/2/23	6/10/23	Birth Palsy-bilateral	Progress satisfactory, still under treatment.
17	19/2/23	27/11/23	Poliomyelitis	Satisfactory. Walking in high boot.
18	18/4/23	20/6/23	Pes Cavus	Good result.
19	18/4/23	13/10/23	Double Congenital Talipes Equino-Varus	Progress satisfactory, still under treatment.
20	28/4/23	28/4/24	Infective Arthritis, right Hip	Good result. Walking well.
21	16/6/23	12/2/24	Poliomyelitis	Walking much better, still under treatment.
22	10/7/23	Still in	T.B. Hip and Knee (left)	Progress satisfactory.
23	3/3/23	1/4/24	Congenital Dislocation of Hip (left)	Discharged in plaster; walking well.
24	5/10/23	24/11/23	Hemiplegia	Foot much improved. Hand still spastic.
25	3/10/23	20/10/23	Spastic Paraplegic	No operation. Attending After-care Clinic.
26	17/10/23	27/11/23	Pseudo-coxalgia	Satisfactory. In plaster.
27	18/10/23	30/4/24	Poliomyelitis (acute)	Satisfactory. Walking well in caliper.
28	24/10/23	27/11/23	Double Congenital Talipes Equino-Varus (left). Supernumerary toes	Still under treatment. Good progress.
29	24/10/23	29/3/24	Poliomyelitis	Walking in ordinary boot.
30	31/10/23	21/11/23	T.B. Spine	Healed. No treatment necessary.
31	28/11/23	9/2/24	Pseudo-hypertrophic Muscular Atrophy	Unsatisfactory.
32	28/11/23	9/2/24	Pseudo-hypertrophic Muscular Atrophy	Unsatisfactory.
33	29/11/23	Still in	Polioencephalitis	Unsatisfactory.
34	3/12/23	Still in	Poliomyelitis	Progressing well.
35	14/12/23	9/2/24	Old Fracture, left Elbow	Full mobility.

The above figures and tables give an inadequate idea of the work performed by these excellent Hospitals. Each of them is recognised as a Special School by the Board of Education, and during their residence the children are taught by well-qualified teachers, so that their education does not suffer in any way. Not only is the teaching valuable in itself, but from the purely medical standpoint it is a distinct advantage to have the patients' minds occupied; to have their minds definitely occupied has a therapeutic value for the children.

The after-care of the children who have been in the Rochdale Crippled Children's Home is undertaken directly by Dr. Bateman, the Surgeon-in-charge of the Home. Dr. Bateman sees in his own private surgery at least once a month all children who have been discharged from the Home, and keeps them under careful observation for long periods until no further supervision is required.

In the Ethel Hedley Hospital, a considerable number of children are seen as out-patients, either for diagnosis or for the treatment of conditions which do not require in-patient treatment. An After-care Clinic is held once a month in Ulverston, where are assembled all the children who have been treated in the hospital at Windermere, together with others who may require any form of attention. The children who attend the After-care Clinic are examined by the Medical Superintendent or the House Surgeon of the Hospital, and the After-care Sister carries out all the adjustments of apparatus or the applications of new plaster bandages that may be necessary. The work done at this After-care Clinic is excellent, but owing to the absence of similar centres in other parts of the County, many of the children who have been treated in the Ethel Hedley Hospital have escaped from the continued supervision and care that are essential. This serious defect will have been remedied before the next Annual Report is written.

The Atherton Guild of Help continued, as before, to help in the treatment and supervision of crippled children in Atherton; one crippled child was maintained by the Guild for four months in the Shropshire Hospital at Gobowen, and the result of the operative treatment was very satisfactory.

The combined charities at Upholland have also been the means of ameliorating the conditions of many crippled children.

The following tables summarise the amount of treatment which was obtained during 1923. The kinds of treatment and the results are also set out.

The first set of tables gives this information about those children who were examined at the routine medical inspection immediately preceding, *i.e.*, generally those children whose medical inspection took place in 1922.

TREATMENT OF DEFECTS.

New Cases.

DISEASE OR DEFECT.	NUMBER OF CHILDREN.							
	Re-ferred for Treat-ment. 1	Treated.			Result.			
		Under Autho-rity's Scheme. 2	Other-wise. 3	Total. 4	Cured. 5	Im-proved. 6	Un-changed 7	No Infor-mation. 8
Minor Ailments (Skin)—								
Ringworm—Head ...	261	28	214	242	210	20	15	16
Ringworm—Body ...	32	3	27	30	30	...	...	2
Scabies	64	2	59	61	60	...	1	3
Impetigo	423	48	355	403	399	2	3	19
Minor Injuries ...	17	5	12	17	17	...	...	...
Other Skin Disease ...	220	20	189	209	150	47	12	11
Ear Disease	656	80	380	460	250	164	135	107
Eye Disease (external and other)	610	38	407	445	304	124	133	49
Dental Disease	2358	192	504	696	461	642	778	477
Other Diseases	1405	72	931	1003	403	552	262	188

TREATMENT OF VISUAL DEFECT.

Referred for Refraction.	NUMBER OF CHILDREN.									
	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary.	No information.
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.						
2902	645	624	507	1776	1556	1509	36	65	84	24

TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for Treatment.	NUMBER OF CHILDREN.				
	Received Operative Treatment.			Received other forms of Treatment.	No information.
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.		
1248	180	327	507	204	6

The following set of tables gives similar information about those children who were recommended to obtain treatment at any inspection prior to the last :—

TREATMENT OF DEFECTS.

Old Cases.

DISEASE OR DEFECT.	NUMBER OF CHILDREN.							
	Referred for Treatment.	Treated.			Result.			
		Under Authority's Scheme.	Otherwise.	Total.	Cured.	Improved.	Unchanged	No Information.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	67	2	62	64	54	5	8	...
Ringworm—Body ...	4	1	3	4	3	1	...	...
Scabies	21	...	20	20	20	...	...	1
Impetigo	54	...	52	52	50	1	1	2
Minor Injuries ...	1	...	1	1	1	...	...	...
Other Skin Disease ...	42	...	39	39	27	10	3	2
Ear Disease	232	8	127	135	60	60	53	59
Eye Disease (external and other)	96	7	52	59	35	20	25	16
Dental Disease	653	45	256	301	67	243	181	162
Other Diseases	339	4	185	189	68	107	84	80

TREATMENT OF VISUAL DEFECT.

NUMBER OF CHILDREN.

Referred for Refraction.	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary.	No information.
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.						
1050	145	144	385	674	538	449	3	14	86	37

TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for Treatment.	Number of Children.				No information.
	Received Operative Treatment.			Received other forms of Treatment.	
	Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.		
413	27	82	109	59	5

OPEN-AIR EDUCATION.

No formal arrangements have been made for open-air education, but a considerable number of classes are taken outside during warm weather, especially in rural districts. The practice is not, however, nearly as widely adopted as it might well be. In urban districts the noise and other distractions of the street are reasons against the wider adoption of the practice.

As a means of preventing disease or promoting convalescence after disease the value of fresh air is more widely recognised as a theoretical proposition than as an article of routine practice.

PHYSICAL TRAINING.

GAMES ASSOCIATIONS.

For the past four years grants in aid of Games Associations have been made by the Education Committee (Elementary Sub-Committee), the amount granted last year being double that granted in each of the three preceding years. The following table shows the number of Associations for which grants have been approved :—

	No. of Associations.	No. of Schools in the Associations.
1920–21	4	27
1921–22	7	42
1922–23	17	146
1923–24	16	134

British Medical Association Library

During the year one Association which had been previously aided became self-supporting and two amalgamated. There has, therefore, been no diminution in this work. Associations tend to require less aid from year to year; the initial expense of forming an Association is the highest. In some districts flourishing Associations have been carried on for some time without having to ask for any grant.

The problem of playing-fields still remains the chief difficulty, and is referred to in the report of most of the Associations.

The reports on the work of the Associations again refer to the benefits resulting from the playing of Organised Games. It is stated that " the games are thoroughly enjoyed by the children, who are showing great keenness combined with a sporting spirit," and that they are " a decided benefit in every way." The games played are practically all ball-games, and include football and cricket for the boys, and hockey, net-ball, rounders, captain ball, and tennis for the girls. Inter-school games are played by representative teams, but the games are not confined to inter-school matches; form or standard matches are arranged for those who do not take part in representative games.

Successful sports days have been held by several Associations. These organised games and sports days take place out of school hours.

The interest shown locally in the Organised Games Associations is fully maintained. Members of Local Committees and Managers are frequently able to assist in securing suitable playing-fields, and in some cases they act on the Executive Committees of the Associations. Several Associations possess trophies which have been presented by members of the Local Committees or by others interested in the schools. In the case of one Association, the Senior League of the town provides playing-fields and referees free of charge, and two sets of medals; the Association has also been presented with a cup and a shield for competition between the schools. The District Clerks help the Associations in all possible ways, and the teachers continue to give time to the training of the children and to raising funds in various ways to enable the work to be carried on satisfactorily. A special difficulty is met with in some districts owing to the distances between the schools; thus, it is stated in the report from one of the Associations that the travelling expenses for one school amounted to £7. This sum was not paid by the Association, and consequently did not appear in the balance sheet; it was raised by the school itself, mainly it is stated by contributions from the teachers.

PLAYING-FIELDS.

The Director of Education made an investigation during the year into the provision of playing-fields for elementary school children. The following table summarises the position as it then was:—

No. of Schools which have the use of a playing-field.	No. of places where playing-fields are used by schools jointly.		No. of Schools which have the use of recreation grounds, waste land, &c., for games.	No. of Schools which have the occasional use of Sports Clubs Grounds.	No. of places where recreation grounds are provided for by Local Authorities, but not used for organised games.
	Places.	Schools.			
80	4	10	62	36	47

In many cases the fields are available for a few months of the year only, whilst in others the fields are used either by boys or by girls only.

Swimming.

For some time the Education Committee (Elementary Sub-Committee) have made provision for aiding the teaching of swimming in those districts where it has been found possible to take the subject as part of the school curriculum. The following table shows the districts in which arrangements were made during the financial year 1923-24 :—

District	Name of District.	No. of Depts. taking part.	Baths attended.
11	Brierfield, &c.	9	Burnley, North Street
13	Padiham, &c.	9	Burnley, Gannow
23	Ramsbottom	1	Bury
25	Whitefield, &c.	3	Radcliffe U.D.
26	Littleborough, &c. ...	5	Rochdale, Shaw and Bacup
28	Litherland, &c.	2	Bootle, Balliol Road
31	Tyldesley, &c.	6	Tyldesley U.D.C.

The reports submitted by the District Clerks and the Head Teachers of the schools show that the children have been much interested in the lessons ; thus one Headmaster, where 42 boys were included in the class, stated that this number might easily have been doubled, and a second reported that the success of the experiment, in his opinion, justified an extension of the privilege. A pleasing fact referred to in one report is the help given by the senior swimmers to the younger section. Land drill has frequently been taken before the children entered the water. Many children have learned to swim, one boy having swum a distance of 1,000 yards under supervision, and in five districts successful galas were held, the prizes being provided by local gentlemen interested in swimming, by local swimming clubs, or by the teachers.

The arrangements made in the various districts differ considerably ; thus instructors are provided at Burnley and Radcliffe for the children from Brierfield, Padiham and Whitefield respectively ; in other districts the instruction is given by the teachers, though reference is made in some reports to the help and advice given by the baths attendants. The Baths Committees in most cases and the Tramways Committees frequently offer special terms to the schools, and the thanks of the Committee are due to these Authorities.

In addition to the districts named above where grants are made by the Committee, instruction in swimming is given in some other schools, generally out of school hours, by private arrangement between the teachers and the Baths Authorities. Instances of this kind include Kirkham and Poulton C.E. Schools, the children attending the Kirkham baths ; Barrowford Central Council School, attending the Nelson baths ; Royton and Crompton Schools, attending the baths in these townships ; and Atherton Schools, attending the Atherton baths.

PROVISION OF MEALS.

The Elementary Education (Provision of Meals) Acts, 1906 and 1914, were not put into operation during the year.

An enquiry was instituted to ascertain what effect, if any, the prolonged unemployment of so many parents was having upon the general health of children in Public Elementary Schools, and whether the industrial conditions of the last two or three years had been attended by a set-back in the well-being of the child population.

The following report was presented to the Committee :—

In an investigation into the general health and nutrition of a large number of school children one is at once faced by the fact that there is no absolute standard of what is and what is not healthy nutrition ; nor are there any well-defined data upon which to form an estimate.

In forming an opinion as to the state of nutrition of the children at the routine medical inspections in the schools of the Administrative County of Lancashire, the following points are taken into consideration :—

> A rough estimate is made of the relation between the child's bulk and height. It is an easy matter for an experienced examiner to pick out by inspection those children who exhibit stunted growth or a thinness which might indicate insufficiency of food ; many of these children, however, will be found quite healthy and well-nourished on further examination. The tone of the muscular system and the state of the skeletal, circulatory, and nervous systems are estimated, and the condition of the skin and hair, and the expression of the face are noted.

An examination conducted on these lines will at once show those children who suffer from marked malnutrition. The examiner then decides whether the malnutrition is due to insufficient or improper food, or to some other cause such as intercurrent disease, oral sepsis, loss of sleep, &c.

From the point of view of nutrition, school children can be roughly divided into three classes :—

> *Class I.* (*Excellent*).—Includes those children whose bulk corresponds to their height, with only a thin layer of subcutaneous fat, muscles of excellent tone, skin healthy both to touch and sight, mucous membranes red, hair healthy, bright eye, alert both at work and play. These children obviously are in excellent health.
>
> *Class II.* (*Normal*).—Includes the large number of children who, although they exhibit no obvious signs of malnutrition, yet do not reach in all respects the physical fitness of the children in Class I.
>
> *Class III.* (*Ill-nourished*).—Includes those children who exhibit signs of malnutrition.

Anyone who is dealing with a large number of children quickly realises that there is a constant interchange between Classes I. and II. Such adverse factors as epidemics will for some weeks, or even months, cause the transference during their convalescence of a number of children from Class I. to Class II. On the other hand, in many instances it has been noted that where the Provision of Meals Acts have been put into force, a large number of children pass from Class II. into Class I. A striking contrast is seen when one compares the interchange between Class II. and III. The interchange in this case is much less marked.

It would appear that there is a wide margin of safety in the metabolism of the growing child, and unless the adverse factors are very severe or very prolonged, or unless there is an actual deficiency in the calorific value of the food, the signs of malnutrition are slow in development, and hence the transference of children from Class II. to Class III., on account of insufficient diet, is a very gradual process.

It is difficult in a child exhibiting well marked signs of malnutrition to raise the nutrition of that child to that of the normal class, and it also is a very gradual process.

With these considerations in mind, the information received from the staff has been analysed. The majority have classified their observations in four periods :—

(1) The years before the War ;
(2) The war period ;
(3) The period of good employment after the War ; and
(4) The recent period of unemployment.

It at once became clear that there was no marked difference in the state of nutrition between these periods, and the variation from one period to another appears to have been very small. It is evident, however, that the children in general during a certain part of the war period were short of fats and sugar, and the members of the staff who were working in the schools at that time think that there was a little more malnutrition than at any other time during the past 15 years. The nutrition reached its highest point in the period of good employment in the post-war period, and probably a number of children passed from Class II. mentioned above into Class I, but the change was by no means marked.

With regard to the prolonged period of unemployment through which the country is passing, it is interesting to note that the opinion is almost unanimous that there is practically no increase of the gross forms of malnutrition as compared with the pre-war period. It is probable that a certain number of children have passed from Class I. to Class II., but there has been no marked accession to Class III.

Unemployment pay, the provision of milk by Local Authorities, food tickets provided by Boards of Guardians, and the help of voluntary agencies, have in combination probably prevented a large amount of malnutrition.

The extra money earned during periods of good employment is not necessarily expended in improving the dietary of the school child. It is probably true to say that more money is spent on food, but the purchases are often unsuitable. In times of unemployment the ordinary dietary is maintained as long as possible, at the expense of clothing, footgear, visits to cinemas, &c. A general deterioration of clothing and footgear has been noted in the schools during recent months. In many of the districts where the textile industry is carried on, the mothers of families are at present out of work or on short time, and thus have more time for domestic occupations, including cooking and the care of the children. This is all to the children's benefit, as far as it goes.

In every school there is a small number of children who appear ill-nourished and undersized, the causes of which can be traced directly to the neglect and ignorance of their parents. The number of these children is less than during the pre-war period. The spread of knowledge through Infant Welfare Centres, School Clinics, visits of School Nurses and Health Visitors, have all tended to reduce this type of case to a minimum.

A discussion as to whether the prolonged period of unemployment through which this country has passed will cause ill-effects long after the period of privation would be a mere matter of conjecture. The possible effects of a shortage of the foods which contain the accessory food factors is at present the subject of much experimental research on animals, and it is, therefore, unnecessary to deal with the subject. In considering the effect of the school meals provided during 1922, it has to be remembered that there was a sudden and complete cessation of employment in some districts, and naturally, after a short period, distress became acute. The feeding of school children at this time became a matter of urgent necessity. As to which agency should carry out the feeding under such circumstances is not relevant to the present discussion.

There can be no doubt that where school children are provided with a well-cooked dinner in the middle of the day the nutrition of these children markedly improves in the course of five or six weeks.

The occurrence of minor ailments is one of the main causes of the loss of school attendance, and it has been suggested that the rise and fall in the percentage of average attendance might give some indication as to the state of nutrition of the children.

The following table shows that the percentage of average attendance has risen steadily during the past four years :—

Year ended 31st March.	Average No. on Books.	Average Attendance.	Percentage of Average Attendance to Average number on Books.
1919	144,739	119,078	82·3
1920	143,911	121,479	84·4
1921	142,289	121,485	85·4
1922	140,511	121,187	86·2
*1923	138,333	120,641	89·1

* Excludes Lytham Saint Annes.

CO-OPERATION OF PARENTS.

The co-operation of parents is being obtained in an ever increasing degree, and is steadily cultivated.

A marked increase in the appreciation of the work of the School Medical Service on the part of the parents is a striking feature of the past few years, and this has been accompanied by a deepening of the sense of parental responsibility.

Parents are not invited to attend the routine inspections as a matter of mere procedure, but parents whose children are found to have defects are sent for specially, and the nature of the defect and the necessity for treatment are explained to them. The great majority of parents attend when invited ; in an enquiry made into this point two years ago it was found that 87·1 per cent. of parents came in response to the invitation.

Where the parent is prevented from attending, or fails to attend, a visit to the home is paid by the Assistant Medical Officer or the Nurse (usually the latter), and a special letter is written to the parent. In the intervals between the Medical Officer's visits to the school the Nurse visits the homes and interviews the parents of all children for whom treatment has not been obtained as a result of the first interview. If necessary parents are interviewed repeatedly until treatment is obtained. These interviews are always made as helpful to the parent as possible. During the year the Medical Officers interviewed 6,585 parents at home or in school, and the Nurses 10,980 parents.

The work undertaken by the Medical Officers and Nurses, under the Maternity and Child Welfare Scheme, re-acts advantageously upon the school medical work. The parents of infants attending the Child Welfare Centres are very often the parents of children attending school, and their visits to the Centre are often utilised by them for consultations about their children who are at school. Similarly the homes visited by the Nurse as Health Visitor are also the homes of children attending school, and the opportunity frequently presents itself for giving advice in regard to school children in a home visited primarily under the Maternity and Child Welfare Scheme,

During the year the total attendances of children at Child Welfare Centres were 60,542, each one of which represents an interview by a parent or guardian with the Medical Officer or Nurse.

In addition, the Nurses paid 56,399 visits to the homes of young children, infants, or expectant mothers.

The effect of this co-operation with the parents is becoming increasingly evident. Instead of resenting medical inspection and regarding the Medical Officer as an interfering official, as was frequently the case at the beginning of medical inspection, the parents have come to regard the Medical Officers and Nurses as their friends, they have confidence in the opinions expressed and the advice tendered, they seek opportunity to avail themselves of the help provided, and, generally speaking, willingly seek the necessary treatment for their children.

In only one instance is there a general lack of co-operation, namely, in the case of dental defect. Only with difficulty can parents be persuaded to obtain dental treatment for their children. They will travel long distances on several occasions to obtain medical or surgical treatment for their children, but they are reluctant to take any trouble to obtain dental treatment. They have little conception of the far-reaching effects of dental and oral sepsis and its effect on general health, growth, and development, and conservative dentistry they regard as a fad. They may consent to seek extraction for an aching tooth, but further than that it is difficult to persuade them to go.

It is not to be supposed that the co-operation of parents which has been just described is of quick growth. No policy which involves frequent changes of staff or which regards medical inspection as within the competence of inexperienced and poorly qualified medical men or women can ever obtain good results. Frequent changes of staff cause such a break of continuity that it is very difficult to establish the atmosphere of friendliness and trust with teachers and parents in which good work can be done.

CO-OPERATION OF TEACHERS.

In the work of medical inspection and following-up, with a view to obtaining treatment for the children, the teachers continue to give valuable assistance. The interest of the Head Teacher is a fundamental necessity for the full success of the scheme of medical inspection, and the majority of the Head Teachers interest themselves to a large extent.

They facilitate the inspection by providing the best accommodation available, selecting special children, inviting the attendance of parents, providing information about the children's previous medical history, family history, domestic circumstances, and so forth.

The presence of the Head Teacher is invited at the medical inspection, and a large number are in close contact with the work throughout the inspection and give valuable assistance and advice. In addition to this work of facilitating the medical inspection, many teachers take the keenest interest in the following-up of cases and in the treatment of those children found defective. In many cases they know well the parents and their circumstances, and are able to influence them to obtain suitable treatment as recommended by the Medical Officers. In one school, for example, where facilities for treatment were lacking, the Head Teacher interviewed a local Ophthalmic Surgeon and arranged for him to treat the school children at his residence as private patients at a considerably reduced fee. He also interviewed a local Optician and arranged for the supply of spectacles, to the Ophthalmic Surgeon's prescription, at a reduced contract price. He also interviewed a local Dentist and arranged similarly for dental treatment for the children, as private patients, at a reduced fee. Even these reduced fees were beyond the immediate reach of most of these parents. The Head Teacher, therefore, assisted them by making the school fund available as an "Invalid Children's Fund." He advanced the necessary fees to the parents, who repaid the sum by arranged weekly instalments.

Teachers facilitate the provision of medical treatment in various other ways; also by obtaining Hospital "recommends," in many cases as the result of a school hospital collection, and by obtaining monetary and other assistance from local charitable sources, philanthropic individuals, and so forth.

CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

The majority of the School Attendance Officers render considerable assistance to the Medical Officers and Nurses. The largest proportion of legitimate absence from school on the part of the children is caused by illness.

The School Attendance Officers facilitate the medical inspection by inviting children who are absent from school and their parents to attend school or clinic to see the Medical Officer. They call the attention of the Medical Officers to children who are unable to attend, or who have never attended, school by reason of mental defect, epilepsy, crippling defect, or blindness, and thereby initiate the procedure which results ultimately in suitable treatment or training being provided for these afflicted children.

It is in the sphere of following-up that the assistance rendered by the School Attendance Officers is most valuable. They are frequently able to obtain assistance from charitable sources for the child in the way of hospital recommends and monetary assistance towards the provision of surgical appliances, spectacles, railway fares, and so forth. Frequently, where the parent has failed, owing to ill-health or indifference, to take the child to obtain treatment, the School Attendance Officer has acted on behalf of the parent. One School Attendance Officer has frequently travelled to hospital with special cases in this way, on Saturday afternoons and Bank Holidays, a distance of over 20 miles, and others similarly a lesser distance to the nearest hospital.

Their knowledge of the children and their parents and of the family circumstances is naturally great. This knowledge is helpful in deciding the necessity of the family when the provision of surgical boots, splints, spectacles, and so forth by the Committee at a reduced price or free of cost is under consideration; and similarly when the contribution of the parents for the maintenance of a child in a Special School or Hospital is under consideration.

The following table shows in a statistical form the relation between the School Medical staff and the School Attendance Officers during 1923:—

No. of interviews with Medical Officers	795
No. of interviews with School Nurses	1,135
No. of visits to homes arising out of medical inspection	1,691
No. of cases specially presented to the Medical Officers and School Nurses	1,639

CO-OPERATION OF VOLUNTARY BODIES.

The valuable assistance rendered by the Atherton Guild of Help, which was fully described in the Annual Report for 1921, has continued to be available. During last summer 32 children were sent to the Country Home provided by the Guild at Edgworth. These children, who had no definite disease, were selected by the Assistant County Medical Officer for the district, and were kept in the Home, amidst pure air and clean surroundings, for a month each, with most beneficial results.

The United Charities of Upholland have a comprehensive scheme of assistance in their area. Food and clothing, blankets and coal, extra nourishment in the form of new-laid eggs and milk, cod liver oil, extract of malt, Virol, &c., are supplied to the poor and to necessitous cases. Spectacles are provided to every Elementary School child in the district who requires them, irrespective of family circumstances.

Drugs and dressings and the services of a nurse for home treatment are provided out of the funds.

By the generous assistance of the United Charities, skilled orthopædic treatment and care are brought within reach of every child in need of it in the district, an arrangement having been made by the Trustees with the Royal Southern Hospital, Liverpool, where many children have obtained treatment.

Railway fares of school children and their guardian to and from hospital and dispensaries are defrayed by the Trustees of the Charity, as are other necessary expenses and the cost of appliances.

The Trustees of the Charity, by means of subscriptions and donations to various hospitals and convalescent homes, are able to obtain every form of treatment required for necessitous school children in the area, and numerous cases have received dental treatment, operative treatment for tonsils and adenoids, and other forms of medical and surgical treatment in various hospitals. Numerous cases are treated daily in their homes by the Nurse, under the supervision of the family doctor, and drugs and dressings are supplied when necessary. The United Charities have been the means of providing Convalescent Home treatment for many debilitated children.

Treatment, care, education and training of blind children have been arranged for by the United Charities in necessitous cases.

The Secretary, who is the Local School Attendance Officer, is in intimate contact with the cases, and takes a keen personal interest in their treatment and after-care; he has himself taken many crippled children long distances to hospital to obtain treatment, and in many other instances has given the utmost help.

The co-operation between the School Medical Department and the United Charities is very close; the Assistant Medical Officer and the Nurse for the area are in frequent conference with the Chairman and Secretary of the Trustees in regard to the treatment of necessitous and other school children.

Other Voluntary Agencies, which have been mentioned from time to time in preceding Reports, have continued to give active assistance. The National Society for the Prevention of Cruelty to Children has always been very helpful, and has done a great amount of valuable work for many years.

The United Services Fund, the Discharged and Demobilised Soldiers' and Sailors' Fund, War Pensions' Committees, and other Ex-Servicemen's Funds have given a considerable amount of useful help. In many parts of the county they have maintained in Convalescent Homes children debilitated by measles, whooping-cough, and other acute illnesses.

The right to two beds in the West Kirby Convalescent Home is given to children resident in Great Crosby and Blundellsands, and use has been made of this privilege by the Medical Staff.

BLIND, DEAF, DEFECTIVE, AND EPILEPTIC CHILDREN.

The methods of ascertaining the existence of these children have been described in previous Reports. In dealing with the first two of these classes the Committee have resumed their former practice of providing education for all, provided that they are mentally and physically capable of being educated, provided that a place can be found in a suitable Special School, and provided that the parents will consent.

In the case of epileptic children, the policy of the Committee is to deal with urgent cases only. No provision is made, except in the case of transfers from other Authorities, for the education of the so-called " educable " mental defectives, the Committee being of the opinion that the money can be more profitably spent on normal children who have to make their way in life.

Blind Children.

The number of children of Elementary School age within the Elementary Education area of the County who are blind within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893, is 39 boys and 50 girls.

During the year 11 blind children of Elementary School age have been specially reported on, and in the following table the causes of blindness are classified :—

Cataract and Nystagmus ...	2
Congenital Cataract	2
Ophthalmia Neonatorum... ...	2
Disseminated Choroiditis... ...	1
Tubercular Kerato-Iritis	1
Tuberculosis	1
Corneal Ulceration	1
Optic Neuritis	1
	11

The number of children of Elementary School age who were maintained in 1923 in the following Institutions for the Blind was 19 boys and 29 girls. The annual cost of maintenance was £3,142, or an average cost of £65 9s. 2d. a child.

	Boys.	Girls.	Total.
Catholic Blind Asylum, Liverpool ...	1	3	4
Homes for the Blind, Fulwood ...	5	6	11
Liverpool School for the Blind ...	2	5	7
Oldham Blind School	1	4	5
Royal Normal College, London ...	—	1	1
Henshaw's Institution for the Blind, Manchester	10	10	20
	19	29	48

Deaf Children.

The number of children within the Committee's Area who are deaf within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893, is 58 boys and 54 girls.

During the year 12 deaf children of Elementary School age have been specially reported on, and in the following table the causes of deafness are classified :—

Congenital	5
Nerve Deafness	4
Otitis Media	2
Measles	1
	12

The number of children of Elementary School age who were maintained in 1923 in the following Institutions for the Deaf was 38 boys and 35 girls. The annual cost was £5,046, or an average cost of £69 2s. 6d. a child.

	Boys.	Girls.	Total.
Burnley Deaf School	2	3	5
Liverpool School for the Deaf	4	2	6
Oldham Deaf School	1	—	1
Royal Schools for the Deaf, Manchester	15	20	35
St. John's Institution, Boston Spa	—	1	1
Thomasson Memorial School, Bolton	3	4	7
Royal Cross Schools for the Deaf, Preston	13	5	18
	38	35	73

EPILEPTIC CHILDREN.

The number of epileptic children of Elementary School age within the Elementary Education Area of the County is 175, of whom 147 are attending Public Elementary Schools; 25 are not at school; one is maintained by the Committee at the Maghull Home for Epileptics and two at the Starnthwaite Epileptic Colony, Westmorland, at an annual cost of £213 4s. 0d., or an average cost of £71 1s. 4d. a child.

MENTAL DEFICIENCY ACT, 1913.

In accordance with the provisions of Section 2 (2) and 31 (1) of the Mental Deficiency Act, 1913, 42 cases were notified to the Local Control Authority during the year. These cases are summarised in the following table :—

	Boys.	Girls.	Total.
Feeble-minded	7	5	12
Imbeciles	14	12	26
Idiots	2	2	4
	23	19	42

NURSERY SCHOOLS.

There are none in the Administrative County. Details of classes administered on Nursery School lines have been given in a preceding section of this Report.

SECONDARY, CONTINUATION AND TECHNICAL SCHOOLS.

The medical inspection of the pupils in attendance at Secondary, Continuation, and Technical Schools has so far been confined to those schools which are provided by or wholly financed by the Committee.

At the present time there are forty-three schools, consisting of thirty-six Secondary Schools, three Technical Schools, and four Continuation Schools.

The girls attending these schools are examined by one woman Medical Officer. The boys are examined by the male Medical Officers, each Assistant County Medical Officer being responsible for the inspection of the boys of the schools which are situated in his own area, and also of the boys of those schools in adjoining areas where the Medical Officer in charge is a woman.

METHOD OF INSPECTION.

All entrants are examined, if possible, during their first term in school. All pupils of twelve years old are examined, and they are examined again in each subsequent year of their school life, but the examination is more thorough in their fifteenth year.

In the following table the pupils attending these schools are shown in two groups, viz., those attending Secondary Schools and those attending Technical and Continuation Schools. The table shows the number of pupils examined during 1923 in the various age groups :—

Age.	Secondary Schools.		Technical and Continuation Schools.	
	No. of Pupils examined.		No. of Pupils examined.	
	Boys.	Girls.	Boys.	Girls.
8	30	11	...	...
9	57	15	...	...
10	159	66	...	...
11	622	214	...	...
12	1,069	481	36	...
13	1,131	518	64	2
14	1,072	541	122	58
15	611	397	115	57
16	281	212	36	1
17	75	108	25	...
18	23	39	1	...
19	1	4	1	...
TOTALS	5,131	2,606	400	118

Number of Pupils re-examined—

Secondary Schools	374
Technical and Continuation Schools	24

Number of Parents interviewed—

Secondary Schools	658
Technical and Continuation Schools	3

FINDINGS OF MEDICAL INSPECTION.

The following table shows the results of the routine medical inspection :—

SECONDARY SCHOOLS

			Boys.							*Girls.*						
			Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
	No Examined		868	1069	1131	1072	611	281	99	306	481	518	541	397	212	151
	Children having Defects............		38·7	39·3	40·9	41·5	37·6	41·6	41·4	65·0	64·2	69·6	69·6	68·2	68·8	59·6
Mental Condition.	Dull and Backward	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	0·1	...	...	...
	Feeble-minded	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Imbeciles	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Idiots	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malnutrition	T	0·1	...	...	...	...	...	...	...	...	0·1	...	...	...	...
		O	0·6	0·8	1·3	0·3	0·3	...	...	0·9	0·8	0·3	...	...	0·4	...
Unclean-liness.	Head	T	...	...	·08	...	...	...	...	...	...	0·1	...	...	...	...
		O	0·1	0·3	0·1	0·1	...	...	...	11·4	9·9	10·4	9·9	8·5	4·2	3·3
	Body	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	0·1	...	...	...	...	0·3	0·4	0·1	...	0·5	0·4	...

				Boys.							*Girls.*						
				Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
Skin.	Ring-worm.	Head	T	...	·09	·08	...	...	...	...	...	0·4	0·1	...	...	...	...
			O	...	...	...	...	...	...	...	...	0·2	...	...	...	...	...
		Body	T	...	...	·08	...	...	...	...	...	0·2	0·1	0·1	...	...	...
			O	...	...	...	...	...	...	...	0·3	...	0·1	...	...	...	...
		Scabies	T	...	...	...	...	...	...	...	0·3	...	...	...	0·2	...	...
			O	...	...	...	...	0·1	...	...	...	0·2	0·1	0·1	...	...	...
		Impetigo	T	0·2	0·2	0·1	0·3	0·1	0·3	1·0	...	...	0·1	0·1	...	...	...
			O	...	...	...	...	...	...	...	0·6	0·6	0·1	0·1	...	...	...
		Other Diseases (Non-Tubercular)	T	1·1	0·6	1·2	0·8	0·4	2·4	1·0	0·9	0·2	0·5	0·3	0·2	0·4	0·6
			O	0·3	0·3	0·6	0·2	0·8	1·0	1·0	1·9	1·8	3·8	5·7	6·8	7·0	4·6
Eye Diseases.		Def. Vision	SP	3·2	4·1	2·9	4·1	3·4	3·5	1·0	8·1	8·5	9·6	7·5	9·5	8·0	7·9
			O	8·4	9·7	10·9	11·3	12·6	15·3	11·1	9·4	11·8	8·1	11·2	13·3	15·0	14·5
		Squint	T	0·2	0·2	0·7	0·1	...	...	...	...	0·4	0·3	0·3	0·7	...	1·3
			O	1·5	1·3	1·0	1·0	1·3	1·7	...	2·2	0·6	2·3	1·4	1·0	1·4	...
		Conjunctivitis	T	0·6	·09	0·2	0·2	0·1	...	...	...	...	...	...	...	...	...
			O	0·4	0·1	0·2	...	0·1	...	...	...	...	0·1	0·1	...	...	...
		Blepharitis	T	0·4	0·5	0·4	0·2	0·1	0·3	...	...	0·4	...	0·3	...	...	...
			O	0·4	0·5	0·5	0·1	0·4	...	...	1·3	1·0	1·1	0·5	0·5	0·4	...
		Keratitis	T	...	...	·08	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Corneal Opacities	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	0·1	...	0·1	...	...	...	...	...	...	0·3	0·1	...	...	...
		Corneal Ulcer	T	...	...	...	...	...	...	...	0·3	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ear Diseases.		Def. Hearing	T	0·2	·09	0·3	...	...	0·3	...	...	0·4	0·5	0·7	1·0	...	...
			O	0·2	0·7	0·8	0·5	0·1	0·3	1·0	2·6	2·7	0·7	2·0	1·2	0·4	0·6
		Otitis Media	T	0·3	0·5	0·6	0·2	0·1	0·3	1·0	...	0·6	...	0·7	0·5	...	...
			O	...	·09	...	...	...	...	...	0·3	0·2	0·3	...	0·2	...	0·6
		Other Ear Diseases	T	0·4	0·8	0·4	0·5	0·1	...	...	...	...	...	...	...	0·4	0·6
			O	...	0·1	0·3	·09	...	0·3	...	...	0·4	...	...	0·2	...	...
Nose and Throat.		Enlarged Tonsils	T	0·4	1·0	0·7	0·3	0·4	0·3	...	2·6	3·1	3·8	2·5	3·2	1·4	1·9
			O	4·3	7·0	4·9	7·2	4·5	2·1	3·0	12·4	10·1	14·2	10·7	11·8	7·5	5·3
		Adenoids	T	0·1	·09	0·2	·09	...	...	...	0·3	...	...	0·1	...	...	...
			O	0·3	0·4	0·5	0·4	0·3	0·3	...	0·6	0·4	0·1	0·7	...	1·4	...
		Enl. T. & A.	T	0·3	0·2	0·3	0·1	...	0·7	...	...	0·4	0·9	...	...	...	...
			O	1·5	1·1	1·6	0·8	0·6	1·0	1·0	0·3	...	0·7	0·5	...	...	...
		Enlarged Cervical Glands (Non-Tubercular)	T	0·1	0·1	...	·09	...	...	...	0·3	0·2	...	0·1	...	...	...
			O	5·6	7·3	8·2	5·9	2·9	1·0	3·0	3·9	6·2	3·4	4·0	1·5	0·9	0·6
		Def. Speech	T	0·1	...	·08	0·1	...	0·3	...	...	...	...	...	...	...	...
			O	1·1	0·5	0·6	·09	0·4	...	...	0·9	0·6	0·3	0·3	0·5	...	0·6
Teeth.		Four or more Carious	T	10·2	9·3	8·5	11·3	10·8	8·9	14·1	5·5	6·8	10·0	11·8	9·5	10·3	13·2
			O	0·6	0·8	1·0	1·2	1·4	1·4	2·0	10·7	6·4	6·9	6·4	10·0	10·8	7·2
		Sepsis	T	0·2	0·8	0·2	0·5	0·3	0·3	...	0·3	0·2	...	0·1	...	0·4	0·6
			O	...	...	...	...	...	...	...	...	0·2	...	...	0·2	...	0·6
Heart and Circulation.		Organic	T	...	·09	...	...	...	...	...	...	...	0·1	...	0·2	...	...
			O	0·4	0·6	0·7	0·8	0·9	0·7	...	0·6	0·4	0·5	0·5	0·5	...	...
		Functional	T	...	...	...	...	...	...	...	...	...	...	...	0·2	...	...
			O	1·6	2·3	1·9	1·4	1·3	2·8	2·0	...	0·4	0·3	1·1	0·7	0·9	0·6
		Anæmia	T	0·1	·09	0·1	·09	...	0·3	...	0·9	1·0	1·5	1·8	2·2	5·1	3·3
			O	0·5	0·8	0·4	0·3	0·4	...	...	1·3	4·1	4·8	5·3	4·7	5·6	6·6
Lungs.		Bronchitis	T	0·6	0·7	0·5	0·1	...	0·7	...	...	...	...	0·3	...	...	...
			O	0·8	1·2	1·1	1·0	0·8	0·3	2·0	0·6	0·4	0·3	0·3	0·5	...	...
		Other Non-T.B. Diseases	T	...	...	0·1	0·2	0·1	...	...	0·3	0·6	0·7	...	...	...	...
			O	0·1	...	...	...	...	...	...	2·2	3·1	2·5	1·8	1·2	0·9	1·3
Tuberculosis.	Pul-monary.	Definite	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Suspected	T	...	...	...	...	0·1	...	...	...	0·2	0·1	0·1	...	...	...
			O	0·1	·09	·08	...	...	...	...	0·6	0·6	0·7	0·7	0·5	...	...
	Non-Pulmonary.	Glands	T	...	...	...	·09	0·1	...	...	...	0·2	0·1	...	...	...	0·6
			O	...	...	·08	...	...	...	...	...	0·2	0·3	0·3	...	0·9	...
		Spine	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	0·1	...	...	0·3	...	...	...	...	...	...
		Hip	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	0·2	...	...
		Other Bones and Joints	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	0·3	...	...	...	...	...	...	...	...	...
		Skin	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...

			Boys.							*Girls.*						
			Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
Nervous System.	Epilepsy	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	0·1	...	·08	...	...	...	...	...	...	...	0·3	...	...	...
	Chorea	T	...	...	...	...	0·1	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	0·3	...	...	0·2	...	0·1	...	...	...
	Infantile Paralysis	T	...	0·1	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	0·1	0·2	0·1	0·4	0·3	...	...	...	0·1	0·3	...	0·4	...
	Rickets	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	1·0	...	0·2	0·5	...	...	...	...	...	...	...	...	...	...
Deformities.	Spinal Curvature	T	0·4	1·2	0·7	0·3	0·1	0·3	...	...	...	...	0·3	0·2	...	...
		O	0·6	0·5	0·7	0·1	0·3	...	1·0	3·9	3·1	3·6	2·5	2·5	1·4	2·6
	Other Forms	T	0·2	...	0·3	·09	0·3	0·3	...	...	...	...	...	...	...	0·6
		O	0·4	0·3	0·1	0·2	0·3	0·7	...	0·3	0·4	0·7	0·5	2·2	2·8	0·6
	Other Diseases or Defects	T	0·4	0·4	0·6	0·4	1·3	0·3	1·0	0·9	1·0	1·5	1·6	1·7	2·3	2·6
		O	1·3	1·5	1·6	2·6	3·4	3·2	3·0	3·9	4·5	6·5	8·3	12·0	14·1	13·2

The following table gives a summary of the visual acuity, as determined by the Snellen Test Types, of all the pupils examined :—

SECONDARY SCHOOLS.

Boys.

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8	30	90·0	83·3	...	3·3	6·6	3·3	3·3	3·3	...	...	...	3·3	...	3·3	...	...
9	57	93·0	89·4	1·7	1·7	3·5	1·7	...	1·7	...	...	...	1·7	1·7	3·5	...	...
10	159	91·1	91·1	3·8	6·2	1·8	...	1·2	0·6	1·2	1·2	0·6	0·6	...	...	...	...
11	622	87·1	86·1	3·7	4·3	2·2	2·6	2·6	1·9	1·4	2·1	1·6	1·3	0·9	0·9	0·3	0·6
12	1069	86·2	85·1	4·1	5·2	1·9	2·4	3·2	2·6	1·6	1·8	1·6	1·0	0·7	1·3	0·5	0·4
13	1131	86·7	84·7	3·5	4·6	2·2	2·3	2·5	3·0	1·9	1·5	1·0	1·5	1·1	1·4	0·9	0·8
14	1072	85·2	84·9	4·9	4·0	2·8	2·8	2·3	3·4	1·6	1·2	1·6	1·4	0·5	0·8	0·9	1·4
15	611	83·3	82·9	5·5	5·4	2·3	2·9	3·7	2·7	1·0	1·1	2·1	1·3	1·0	1·8	1·0	1·6
16	281	80·4	82·2	5·0	3·5	2·1	2·5	2·5	3·2	4·2	3·5	2·8	2·8	1·0	0·7	1·8	1·4
17	73	87·6	90·4	4·1	1·4	2·7	2·7	...	2·7	1·4	...	1·4	...	1·4	1·4	1·4	1·4
18	20	90·0	75·0	...	5·0	...	...	10·0	10·0	...	5·0	...	...	...	...	...	5·0
19	1	...	100·0	...	...	...	...	100·0	...	...	...	...	...	...	...	...	...

Girls.

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
8	11	63·6	72·7	18·1	9·1	...	9·1	18·1	9·1	...	...	...	...	...	...	...	...
9	15	66·6	66·6	26·7	20·0	...	...	...	6·7	...	...	...	...	6·7	6·7	...	...
10	66	81·8	86·4	7·6	7·6	3·0	1·5	4·5	4·5	1·5	...	1·5	...	...	...	...	...
11	214	79·9	77·1	3·7	9·3	3·2	3·7	5·6	1·9	3·7	2·3	1·4	2·8	1·4	2·3	0·9	0·4
12	481	78·2	78·4	7·1	7·3	3·3	4·4	3·3	3·3	2·7	2·7	1·2	1·0	2·1	0·6	2·1	2·3
13	518	78·6	77·2	6·1	8·5	3·3	3·5	4·4	3·1	2·7	1·5	1·9	1·9	1·5	2·5	1·3	1·7
14	541	75·6	76·1	8·9	8·3	2·9	2·9	4·4	4·2	2·2	2·2	1·6	2·2	2·4	2·6	1·8	1·3
15	397	75·5	75·5	7·0	8·0	3·8	2·7	5·3	3·8	2·0	2·7	2·7	2·3	1·2	2·5	2·3	2·5
16	212	77·8	73·1	5·7	8·9	4·2	3·3	2·4	5·1	2·8	2·8	0·9	0·4	3·3	3·3	2·8	2·8
17	108	79·6	82·4	4·6	0·9	1·8	1·8	1·8	2·8	0·9	1·8	6·5	4·6	0·9	0·9	3·7	4·6
18	39	74·3	76·9	5·1	5·1	5·1	5·1	5·1	...	2·5	2·5	2·5	7·7	2·5	...	2·5	2·5
19	4	100·0	100·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...

It has not yet been found possible for statistical and other reasons to make an exhaustive comparison between Secondary and Elementary School children, but certain broad conclusions may be drawn from the above figures. It must be remembered, however, that while the comparisons to be made are broadly accurate, they cannot be pressed in detail. There are mathematical and statistical considerations which tend to invalidate the strict accuracy of the comparisons ; for example, the " Leaver " group in the Elementary Schools is not sub-divided into its three component age groups of 12, 13, and 14 year olds, whereas this sub-division is made in the Secondary School figures. In fact, however, the great majority of the " Leaver " group in the Elementary Schools is composed of 12 year olds. The numbers, too, in the Elementary Schools are sufficiently large to exclude gross statistical fallacies, but not so in the Secondary Schools, especially in the girls ; there is, therefore, in the case of the girls especially, a possible source of fallacy.

Again, there is for the secondary girls a single Medical Officer with a single standard, for the boys there were thirteen Medical Officers with standards which must vary somewhat ; for reasons, too, connected with the onset of puberty the examination of the girls needs to be very thorough. These factors tend to make comparisons between the boys and girls in Secondary Schools misleading.

A larger proportion of the girls in Elementary Schools show verminous conditions, but the proportion in Secondary Schools is none the less somewhat disquieting. Girls of 12, 13, and 14 years of age are verminous to the extent of 10·3 per cent., 10·6 per cent., and 9·9 per cent. respectively. The corresponding percentage for the "Leaver" group of girls (aged 12, 13, and 14 years) in Elementary Schools is 19·4. Secondary School girls of 15 and 16 years are verminous to the extent of 9 per cent. and 4·6 per cent. respectively.

Of Secondary School boys only 0·09 per cent. of the 12 year olds and 0·26 per cent. of the 13 year olds are verminous, compared with 1·85 per cent. of the leaver group of boys in the Elementary Schools.

The cleanliness, therefore, of Secondary School pupils compares, on the whole, favourably with that of Elementary School children, although a very large proportion of them have been at Elementary Schools. This is probably due, partly to the fact that the pupils are now old enough and self-respecting enough to take care of themselves, partly to the fact that they are to some extent picked children and come from homes where the parents are more self-reliant and self-respecting and more ambitious for their children, and partly to the influence of the Secondary School atmosphere.

VISION.

Defects of vision are commoner in Secondary School pupils than in those who attend the Elementary Schools ; in both types of school they are commoner amongst the girls than the boys.

The following table shows the difference clearly in percentages :—

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12. 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	8·9	13·8	13·8	15·4	16·0	18·8
Girls ...	11·4	20·3	17·7	18·7	22·8	23·0

No completely satisfactory explanation of the higher incidence of visual defects amongst girls than boys has ever been given, whether it is in some inherent difference in their eyes or whether it is to be found in the different circumstances of their mode of living. The progressively higher incidence of visual defects in both sexes, as school life continues, is significant.

TEETH.

The amount of dental disease amongst Secondary School pupils is very great—even greater than amongst Elementary School children, as is shown by the following Table. It is to be remembered that only bad dental defects are noted at all for statistical purposes, namely, dental sepsis, and where there are at least four carious teeth. All the teeth of Secondary School children are, moreover, permanent teeth.:—

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12, 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	10·41	10·9	9·7	13·0	12·5	10·6
Girls ...	9·71	13·6	16·9	18·3	19·7	21·5

It may be noted, however, that there is in Secondary School pupils more evidence of conservative dentistry, and many more children are seen whose teeth have been regularly attended to than in Elementary Schools.

ANÆMIA.

Anæmia and associated conditions are generally much increased in Secondary School pupils, and particularly amongst the girls. The Secondary School life period coincides with the onset of puberty and, in the girls, with the commencement of the menstrual function, and these are associated with profound mental and emotional changes. It is, moreover, a period of rapid growth and development which in themselves are a great charge on a young person's constitution. The danger of overstrain is, therefore, real, and it is imperative so to arrange the course and amount of school work as to avert the danger; the danger is greater in the case of the girls, whose self-protective mechanism is probably less perfect. Girls, too, have probably more out-of-school demands to meet than boys in the shape of domestic work, music lessons, &c.

The following tables show in percentages the relative incidence in boys and girls and in Elementary and Secondary Schools of a group of defects which are more peculiarly related to the age of puberty and the period of Secondary School life:—

Anæmia.

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12, 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	0·5	0·89	0·5	0·39	0·4	...
Girls ...	1·0	5 1	6·3	7·1	6·9	10·7

Spinal Curvature.

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12, 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	0·3	1·7	1·4	0·4	0·4	0·3
Girls ...	0·25	3·1	3·6	2·8	2·7	1·4

Other Deformities.

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12, 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	0·7	0·3	0·4	0·29	0·6	1·0
Girls ...	0·8	0·4	0·7	0·5	2·2	2·8

Other Diseases.

	ELEMENTARY SCHOOLS.	SECONDARY SCHOOLS.				
	" Leaver " Group (12, 13, and 14 years).	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.
Boys ...	2·0	1·9	2·0	3·0	4·7	3·5
Girls ...	3·4	5·5	8·0	9·9	13·7	16·4

The majority of the deformities are included under the headings of spinal curvature and flat-foot. Many of these children are round shouldered and flat chested, others suffer from lateral curvature of the spine. In many the defect is slight, but in others it is more severe, and in all it is evidence of the existence of conditions inimical to health. Girls are affected more than boys.

The prevention of these deformities lies in a relatively increased proportion of physical training and games, or in a re-adjustment of the three factors—study, physical exercise, and rest.

Slight degrees of Hallux Valgus, a deformity of the great toe, which may cause considerable inconvenience and crippling in later life, are often met with. A common cause is the persistence in wearing sound boots which have become too small for the rapidly growing feet of the Secondary School pupil. At certain times growth is very rapid.

In one Secondary School which had an unduly large proportion of pupils suffering from postural deformities a special class for remedial exercises was organised out of school hours under the School Instructor of Physical Training, for which the parents paid a small additional fee. The class was entirely voluntary. The class was held in the school gymnasium. Each boy was given a printed slip of half a dozen suitable exercises. He was taught how to perform these exercises correctly in the class, and was required to perform same at home for 20 minutes, morning and evening, or as otherwise instructed by the Physical Training Instructor. The interest of the pupils was stimulated by the Physical Training Instructor, and they eagerly carried out the instruction.

Special attention was given to these pupils in the routine physical training period in school hours by the Physical Training Instructor, and also in study periods by the form teachers, with a view to avoiding unnecessary standing or incorrect posture. These pupils were encouraged to join the swimming club during the summer and to play games.

A special dancing class was arranged for the flat-footed, and all were encouraged to join.

Parents were interviewed and advised in all details of special treatment, attention to general health, boots, &c. The improvement observed in these pupils was striking. Some had improved beyond recognition during so short a period as four months.

OVERSTRAIN.

Secondary School life imposes a strain on many pupils. Overstrain may be mental or physical, or both. Secondary education imposes a strain which is fundamentally mental, in the sense that it is the result of application to study rather than of an excess of athletics or of muscular exercise.

The causes of overstrain in Secondary School pupils may be classified broadly into two divisions :—

1.—Causes largely or entirely beyond the control of those responsible for the school curriculum, such as inherent defect in the child itself, constitutional weakness, hereditary nervous disposition, definite disease or defect, the onset of puberty, malnutrition, poor home circumstances, insufficient or disturbed sleep, insanitary environment out of school, &c.

2.—Causes within the control of those responsible for the school curriculum or occurring within the school itself ; for example, excessive home work, defective ventilation, insufficient physical exercise, pressure of examinations.

There is evidence that a number of Secondary School pupils are suffering from overstrain. It is hard to estimate the number accurately, but many of the pupils who are included in the last four tables as suffering from anæmia, spinal curvature, and other deformities, and from " other diseases," show signs of overstrain. Sometimes these conditions are the cause and sometimes the effect of overstrain ; frequently they are links in a vicious circle.

The signs of overstrain may be mental and nervous, or physical, or both. Overstrain is frequently shown by a falling off in intellectual ability, by a failure of concentration, by inattention, irritability and other changes in character, insomnia, headaches, fidgets, habit spasms, and by other evidence of nervous disorder.

The defects found in the medical examination of Secondary School pupils are, in general, similar to those found in Elementary School children, but there is, in addition, the group of defects shown in the four preceding tables which are more specially or more frequently found in Secondary schools. Amongst these pupils are noted :—

1.—A considerable falling-off in physique and general muscular development ;

2.—A deterioration in general health, manifested by anæmia and debility and loss ot muscular tone, with associated functional disorders of the heart, palpitation, shortness of breath, indigestion, loss of appetite, and constipation ;

3.—As a result of this general deterioration, an excessive number of cases of physical deformities, chiefly postural ; the chief of these are spinal curvatures, flat-feet, poor chest development ;

4.—Nervous disorders, such as migraine and spasmodic asthma, which appear to be more frequent in Secondary than in Elementary Schools.

Overstrain seems to be most common at three different periods :—

(1) At the beginning of Secondary School life.

Strain found at this stage seems to be caused by an over-anxiety of the young pupil to " make good " in the new environment, and possibly in some cases to justify the struggle made by the parents in sending it to a Secondary School.

There is also a second factor in these pupils of 8-12 years of age ; they are precipitated into a new type of work, new subjects, and different methods. It would seem that the amount of homework given to these youngsters might be either none or very small.

(2) During growth years (12-15 years).

This is a period during which the physiological age and the chronological age may not correspond. The strain in this period is more marked in the mixed schools. In the purely girls' schools, the signs of strain in this period may be accounted for by other factors such as economic conditions and domestic arrangements. A considerable number of girls show definite signs of exhaustion, anæmia, and lack of sleep. This is the time when music and other extra studies outside the school curriculum are continued. Another important factor in some schools is the long distance some pupils have to travel every day.

(3) The public examination period.

The strain at this period may be the result of over-pressure during the growth period. The girls become anæmic and run down, and do not take time to attend to the ordinary rules of health, and worry and anxiety about their work affects them greatly. During the latter part of school life it is too common to find that even the short period which in most schools is all that is allowed for physical exercises is cut out altogether in the case of senior boys and girls who are studying for important examinations.

It is interesting to note that in Technical and Continuation Schools the incidence of overstrain from study is less than in the Secondary Schools. The pupils in Technical and Continuation Schools do more manual work and get more physical exercise. Indeed, a general comparison of the physique and condition of the pupils attending the Continuation and Technical Schools with the physique and condition of pupils at Secondary Schools is in favour of the former.

The following table shows the results of the routine medical inspection of Technical and Continuation Schools :—

TECHNICAL AND CONTINUATION SCHOOLS.

			Boys.							*Girls.*						
			Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
	No. Examined		...	36	64	122	115	36	27	...	...	2	58	57	1	...
	Pupils having Defects		...	33·3	40·6	42·6	40·0	47·2	70·3	...	...	50·0	51·7	57·9	100	...
Mental Condition.	Dull and Backward	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Feeble-minded	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	0·8	...	...	...	...	...	...	...	...	...	...
	Imbeciles	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Idiots	T	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malnutrition	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	3·1	0·8	...	...	...	...	...	...	...	1·7	...	...
Unclean-liness.	Head	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	2·7	1·5	...	...	...	...	...	...	50·0	17·2	19·3	...	...
	Body	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	2·7	...	0·8	...	...	...	...	...	...	...	...	...	...
Skin.	Ring-worm. Head	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ring-worm. Body	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scabies	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Impetigo	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	1·7	...	...	...
	Other Diseases (Non-Tubercular)	T	...	...	...	...	...	...	...	...	...	...	1·7	3·5	...	...
		O	...	...	1·5	...	...	...	...	...	...	...	...	1·7	...	...
Eye Diseases.	Def. Vision	SP	...	2·7	4·6	5·7	3·4	2·7	...	...	...	...	10·3	14·0	...	...
		O	...	11·1	18·7	11·4	10·4	5·5	11·1	...	...	...	...	3·5	...	...
	Squint	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	1·7	...	...
	Conjunctivitis	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	1·7	...	...	...
	Blepharitis	T	...	...	...	0·8	...	...	...	...	...	...	1·7	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Keratitis	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Corneal Opacities	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		O	...	...	...	...	0·8	...	...	...	...	...	...	...	...	...
	Corneal Ulcer	T	...	...	...	...	...	...	...	...	...	...	1·7	...	...	...
		O	...	...	...	...	...	...	..	...	...	...	...	...	...	...

				Boys.							Girls.						
				Ages 8-11	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19	Ages 8-11.	Age 12.	Age 13.	Age 14.	Age 15.	Age 16.	Ages 17-19
Ear Diseases.		Def. Hearing	T	...	...	...	1·6	1·7	...	...	...	...	...	1·7	...	...	...
			O	...	8·3	1·5	4·1	2·6	2·7	3·7	...	...	...	6·9	...	...	...
		Otitis Media	T	...	...	1·5	4·9	0·8	2·7	...	...	...	...	1·7	...	...	...
			O	...	...	...	0·8	...	...	...	...	...	...	...	...	...	...
		Other Ear Diseases	T	...	...	...	...	...	...	...	...	...	...	...	1·7	...	...
			O	...	5·5	...	...	...	...	...	...	...	...	...	...	...	...
Nose and Throat.		Enlarged Tonsils	T	...	...	1·5	0·8	...	...	3·7	...	...	...	1·7	3·5	...	...
			O	...	2·7	3·1	0·8	5·2	8·3	7·4	...	...	...	10·3	7·0	...	...
		Adenoids	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Enl. T. & A.	T	...	...	...	0·8	...	...	...	...	...	...	...	...	...	...
			O	...	2·7	1·5	0·8	...	...	7·4	...	...	...	...	...	...	...
		Enlarged Cervical Glands (Non-Tubercular)	T	...	...	...	...	...	...	...	...	...	...	...	1·7	...	...
			O	...	...	...	3·2	1·7	2·7	...	...	...	...	1·7	1·7	...	...
		Def. Speech	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	2·4	...	...	...	...	...	...	...	...	...	...
Teeth.		Four or more Carious	T	...	11·1	4·6	8·1	10·4	11·1	18·5	...	...	...	13·8	24·5	100·0	...
			O	...	...	...	...	...	...	...	...	...	...	8·6	7·0	...	...
		Sepsis	T	...	...	...	...	...	...	...	...	...	...	...	1·7	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Heart and Circulation.		Organic	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	0·8	2·7	7·4	...	...	...	...	...	...	...
		Functional	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	2·7	1·5	0·8	2·6	2·7	...	...	...	...	...	...	...	...
		Anæmia	T	...	...	...	...	...	...	...	...	...	...	1·7	5·2	...	...
			O	...	...	...	0·8	...	...	...	...	...	...	1·7	1·7	100·0	...
Lungs.		Bronchitis	T	...	...	...	...	...	2·7	...	...	...	...	...	...	...	...
			O	...	...	...	1·6	0·8	8·3	7·4	...	...	...	...	...	...	...
		Other Non-T.B. Diseases	T	...	...	...	...	...	...	...	...	...	...	1·7	1·7	...	...
			O	...	...	...	...	...	...	...	...	...	...	1·7	...	...	...
Tuberculosis.	Pulmonary.	Definite	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Suspected	T	...	...	...	...	...	...	...	...	...	...	...	1·7	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Non-Pulmonary.	Glands	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	2·7	...	...	...	...	1·7	...	...	...
		Spine	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Hip	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Other Bones and Joints	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Skin	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nervous System.		Epilepsy	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chorea	T	...	...	1·5	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Infantile Paralysis	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	1·5	1·6	1·7	2·7	...	...	...	...	...	...	...	...
		Rickets	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	3·1	2·4	0·8	5·5	...	...	...	...	...	...	...	...
Deformities.		Spinal Curvature	T	...	...	...	0·8	...	...	...	...	...	...	...	...	...	...
			O	...	...	1·5	0·8	0·8	2·7	...	...	...	...	...	...	...	...
		Other Forms	T	...	...	...	...	...	...	3·7	...	...	...	...	...	...	...
			O	...	...	...	1·6	1·7	2·7	...	...	...	...	5·1	5·2	...	...
		Other Diseases or Defects	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			O	...	...	...	...	0·8	2·7	11·1	...	...	50·0	5·1	1·7	...	...

The following table gives a summary of the visual acuity as determined by the Snellen Test Types :—

TECHNICAL AND CONTINUATION SCHOOLS.

Boys

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R	L.	R	L	R.	L.	R	L.	R.	L.	R.	L
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	36	94·4	88·9	...	2·7	...	...	...	2·7	...	...	2·7	2·7	2·7	2·7	...	...
13	64	84·3	79·7	3·1	3·1	4·7	3·1	1·5	4·7	1·5	4·7	...	1·5	...	...	4·7	3·1
14	122	78·7	81·1	5·7	4·1	4·1	3·2	4·9	5·7	1·6	1·6	2·4	2·4	2·4	1·6	...	...
15	115	89·9	80·0	7·8	6·1	3·4	6·1	0·9	1·7	3·4	1·7	1·7	0·9	0·9	2·6	0·9	0·9
16	36	86·1	83·3	5·5	8·3	...	...	...	2·7	2·7	2·7	2·7	...	2·7	2·7	...	...
17	25	72·0	68·0	16·0	12·0	...	...	8·0	8·0	4·0	4·0	...	8·0	...	...	...	...
18	1	...	100·0	100·0	...	...	...	...	...	...	...	...	...	...	...	...	...
19	1	100·0	100·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Girls.

Age last Birthday.	Number Examined.	6		9		12		18		24		36		60		0	
		R.	L.	R.	L.	R	L	R	L	R.	L.	R	L.	R.	L.	R.	L.
8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	2	50·0	50·0	50·0	50·0	...	...	...	...	...	...	...	...	...	...	...	...
14	58	67·2	72·4	13·7	12·0	5·1	3·4	8·6	8·6	...	...	3·4	1·7	...	1·7	1·7	...
15	57	73·7	63·1	7·0	14·0	8·7	8·7	5·3	10·5	...	...	1·7	...	1·7	...	1·7	3·5
16	1	100·0	100·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TREATMENT.

The facilities which are available for the treatment of children attending the Elementary Schools have not been formally extended to the pupils of Secondary Schools, but, in fact, they are available for all children whose parents are not in a position to obtain the necessary treatment elsewhere.

The teachers have again been most helpful in procuring treatment for defects, and their co-operation in this as in most of the other sides of medical inspection has been of great assistance to the Medical Officers.

The following tables show in summary form the amount, kind, and results of the treatment obtained during the year.

The first set of tables gives this information in regard to those pupils who were examined at the previous medical inspection (" new cases ") :—

SECONDARY SCHOOLS.

Treatment of Defects.

New Cases.

Boys.

Disease or Defect.	Number of Pupils.							
	Re-ferred for Treat-ment.	Treated.			Result.			
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed	No Infor-mation.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	1	...	1	1	1	...	...	...
Ringworm—Body ...	1	...	1	1	1	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	14	...	14	14	14	...	...	...
Minor Injuries ...	1	...	1	1	1	...	...	...
Other Skin Disease ...	21	...	17	17	11	4	3	3
Ear Disease	53	...	42	42	24	10	13	6
Eye Disease (external and other)	28	...	24	24	20	4	2	2
Dental Disease	323	...	195	195	111	69	67	76
Other Diseases	116	...	92	92	39	50	8	19

Girls.

Disease or Defect.	Number of Pupils.							
	Re-ferred for Treat-ment.	Treated.			Result.			
		Under Authority's Scheme.	Other-wise.	Total.	Cured.	Im-proved.	Un-changed	No Infor-mation.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	3	...	2	2	2	...	...	1
Impetigo	7	...	7	7	6	...	...	1
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	11	...	10	10	9	1	1	...
Ear Disease	34	...	21	21	5	8	12	9
Eye Disease (external and other)	6	...	5	5	5	...	...	1
Dental Disease	469	1	301	302	85	181	101	102
Other Diseases	93	1	55	56	10	37	14	32

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TREATMENT OF VISUAL DEFECT.

	NUMBER OF PUPILS.									
	Referred for Refraction.	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary.
		Under Authority's Scheme—Clinic, or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.					
Boys	193	12	86	54	152	145	144	2	1	5
Girls	142	6	67	40	113	110	110	1	1	1

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.				
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.	
Boys	62	2	10	12	32
Girls	114	...	15	15	42

TECHNICAL AND CONTINUATION SCHOOLS.

TREATMENT OF DEFECTS.

NEW CASES.

Boys.

DISEASE OR DEFECT.	NUMBER OF PUPILS.							
	Referred for Treatment. 1	Treated.			Result.			
		Under Authority's Scheme. 2	Otherwise. 3	Total. 4	Cured. 5	Improved. 6	Unchanged 7	No Information. 8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	1	...	1	1	1	...	...	...
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	4	...	4	4	3	1	...	...
Ear Disease	5	...	2	2	...	2	3	...
Eye Disease (external and other)	4	...	3	3	3	...	...	1
Dental Disease	33	...	13	13	8	5	9	11
Other Diseases	13	...	8	8	2	8	3	...

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.							
	Referred for Treatment.	Treated.			Result.			
		Under Authority's Scheme	Otherwise.	Total.	Cured.	Improved.	Unchanged	No Information.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	...	...	...	...	...	...	...	...
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	...	...	...	...	...	...	...	...
Ear Disease	1	...	...	...	...	1	...	...
Eye Disease (external and other)	1	...	1	1	...	1	...	...
Dental Disease	22	...	5	5	...	5	12	5
Other Diseases	5	...	2	2	...	2	2	1

TREATMENT OF VISUAL DEFECT.

	NUMBER OF PUPILS.									
	Referred for Refraction.	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.					
Boys	10	...	5	2	7	7	7	...	...	...
Girls	6	...	1	3	4	4	4	...	...	...

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.				
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.	
Boys	3	...	1	1	1
Girls	4	...	...	...	1

The following set of tables gives similar information in regard to those pupils who were recommended to obtain treatment at some inspection prior to the last ("old cases"):—

SECONDARY SCHOOLS.

Treatment of Defects.

Old Cases.

Boys.

Disease or Defect.	Number of Pupils.							
	Referred for Treatment.	Treated.			Result.			
		Under Authority's Scheme.	Otherwise.	Total.	Cured.	Improved.	Unchanged	No information.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	...	...	...	...	...	...	...	...
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	4	...	2	2	1	...	1	2
Ear Disease	10	...	5	5	2	1	4	3
Eye Disease (external and other)	1	...	1	1	...	1	...	...
Dental Disease	112	...	52	52	23	30	19	40
Other Diseases	8	...	6	6	1	3	3	1

Girls.

Disease or Defect.	Number of Pupils.							
	Referred for Treatment.	Treated.			Result.			
		Under Authority's Scheme.	Otherwise.	Total.	Cured.	Improved.	Unchanged	No Information.
	1	2	3	4	5	6	7	8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	...	...	...	...	...	...	...	...
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	...	...	...	...	...	...	...	...
Ear Disease	1	...	...	...	...	...	...	1
Eye Disease (external and other)	...	...	...	...	...	...	...	...
Dental Disease	13	...	7	7	3	2	4	4
Other Diseases	1	...	1	1	...	1	...	...

Treatment of Visual Defect.

	Number of Pupils.									
	Referred for Refraction.	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary
		Under Authority's Scheme, Clinic or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.					
Boys	72	1	19	24	44	39	36	...	...	2
Girls	2	...	1	...	1	1	1	...	...	...

Treatment of Defects of Nose and Throat.

	Number of Pupils.				
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.	
Boys	10	1	1	2	4
Girls	6	...	1	1	1

TECHNICAL AND CONTINUATION SCHOOLS.

Treatment of Defects.

Old Cases.

Boys.

Disease or Defect.	Number of Pupils.							
	Referred for Treatment. 1	Treated.			Result.			
		Under Authority's Scheme. 2	Otherwise. 3	Total. 4	Cured. 5	Improved. 6	Unchanged 7	No Information. 8
Minor Ailments (Skin)—								
Ringworm—Head	...	...	...	...	...	...	...	...
Ringworm—Body	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	...	...	...	...	...	...	...	...
Minor Injuries	...	...	...	...	...	...	...	...
Other Skin Disease	...	...	...	...	...	...	...	...
Ear Disease	...	...	...	...	...	...	...	...
Eye Disease (external and other)	...	...	...	...	...	...	...	...
Dental Disease	...	...	...	...	...	...	...	...
Other Diseases	...	...	...	...	...	...	...	...

Girls.

DISEASE OR DEFECT.	NUMBER OF PUPILS.							
	Referred for Treatment. 1	Treated.			Result.			
		Under Authority's Scheme. 2	Otherwise. 3	Total. 4	Cured. 5	Improved. 6	Unchanged 7	No Information. 8
Minor Ailments (Skin)—								
Ringworm—Head ...	...	...	...	...	...	...	...	...
Ringworm—Body ...	...	...	...	...	...	...	...	...
Scabies	...	...	...	...	...	...	...	...
Impetigo	...	...	...	...	...	...	...	...
Minor Injuries ...	...	...	...	...	...	...	...	...
Other Skin Disease ...	...	...	...	...	...	...	...	...
Ear Disease	...	...	...	...	...	...	...	...
Eye Disease (external and other)	...	...	...	...	...	...	...	...
Dental Disease	8	...	...	...	...	...	1	7
Other Diseases	1	...	...	...	...	...	...	1

TREATMENT OF VISUAL DEFECTS.

	NUMBER OF PUPILS.									
	Referred for Refraction.	Submitted to Refraction.				For whom Glasses were Prescribed.	For whom Glasses were Provided.	Recommended for Treatment other than by Glasses.	Received other forms of Treatment.	For whom no Treatment was considered necessary.
		Under Authority's Scheme, Clinic or Hospital.	By Private Practitioner or Hospital.	Otherwise.	Total.					
Boys	...	...	...	...	...	...	...	...	...	...
Girls	...	...	...	...	...	...	...	...	...	...

TREATMENT OF DEFECTS OF NOSE AND THROAT.

	NUMBER OF PUPILS.				
	Referred for Treatment.	Received Operative Treatment.			Received other forms of Treatment.
		Under Authority's Scheme—Clinic or Hospital.	By Private Practitioner or Hospital.	Total.	
Boys	...	...	...	...	...
Girls	...	...	...	...	...

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

A considerable number of children have been examined for the purpose of employment. The formal arrangements remain as described in previous Reports.

SUPERVISION OF MOTHERLESS AND ILLEGITIMATE CHILDREN.

The arrangements have previously been described in detail. These children are the children of " officers or men in the Navy, Military and Air Services of His Majesty, who have died from causes arising out of service during the war, or who, by reason of their mothers being dead, or for any other reason, are suffering from neglect or want of proper care."

The following table shows the number of children under supervision during the year :—

Neglected Children (visited about every six weeks and reported on quarterly)	10
Motherless and Illegitimate Children (under general supervision) ...	232

MISCELLANEOUS.

During the year the Assistant County Medical Officers have examined a large number of applicants for Bursarships, and also many Bursars, Student Teachers, and Elementary and Secondary School Teachers.

Lectures have been given during the year on medical and hygienic subjects by the medical staff to various voluntary organisations, and the staff have been encouraged to take the broadest view of their duties and responsibilities in promoting the national health.

APPENDIX.

STATISTICAL TABLES IN RESPECT OF THE ROUTINE INSPECTION OF ELEMENTARY SCHOOLS CARRIED OUT DURING THE YEAR ENDED 31ST DECEMBER, 1923.

TABLE I.—Return of Medical Inspections.

A.—Routine Medical Inspections.

Number of Code Group Inspections—		
Entrants	10,453	
Intermediates	11,366	
Leavers	17,765	
Total		39,584
Number of other Routine Inspections		...

B.—Other Inspections.

Number of Special Inspections	12,503
Number of Re-inspections at routine medical inspections of schools	14,093
Number of children examined at re-visits to schools by Medical Officers	14,747

TABLE II.

A.—Return of Defects found in the course of Medical Inspection in 1923.

	Defect or Disease. (1)	Routine Inspections. Number referred for Treatment. (2)	Routine Inspections. Number requiring to be kept under observation, but not referred for Treatment. (3)	Specials. Number referred for Treatment. (4)	Specials. Number requiring to be kept under observation, but not referred for Treatment. (5)
	Malnutrition	25	768	10	509
	Uncleanliness—				
	Head	433	3407	146	1509
	Body	30	304	33	79
Skin.	Ringworm—				
	Head	103	24	88	15
	Body	29	19	15	2
	Scabies	27	2	22	...
	Impetigo	304	57	118	29
	Other Diseases (Non-Tubercular) ...	185	200	76	51
Eye.	Blepharitis	187	208	95	61
	Conjunctivitis	103	58	40	12
	Keratitis	12	2	9	3
	Corneal Ulcer	10	4	1	4
	Corneal Opacities	15	79	4	24
	Defective Vision	1457	1606	41	604
	Squint	244	227	123	124
	Other Conditions	...	...	...	...
Ear.	Defective Hearing	49	233	47	83
	Otitis Media	233	63	88	20
	Other Ear Diseases	174	76	48	9
Nose and Throat.	Enlarged Tonsils	375	2046	148	630
	Adenoids	107	269	116	116
	Enlarged Tonsils & Adenoids	172	458	102	134
	Other Conditions	...	...	...	...

TABLE II.—Continued.

	DEFECT OR DISEASE. (1)	Routine Inspections. Number referred for Treatment. (2)	Routine Inspections. Number requiring to be kept under observation, but not referred for Treatment. (3)	Specials. Number referred for Treatment. (4)	Specials. Number requiring to be kept under observation, but not referred for Treatment. (5)
	Enlarged Cervical Glands (Non-Tubercular)	18	2619	14	617
	Defective Speech	6	212	7	102
Heart and Circulation	Heart Disease—				
	Organic	21	210	5	82
	Functional	1	410	...	102
	Anæmia	108	212	77	76
Lungs.	Bronchitis	158	511	67	136
	Other Non-Tubercular Diseases	3	9	5	2
Tuberculosis.	Pulmonary—				
	Definite	5	2	2	...
	Suspected	17	37	10	35
	Non-Pulmonary—				
	Glands	45	41	32	19
	Spine	2	8	1	3
	Hip	2	5	2	...
	Other Bones and Joints	5	7	3	3
	Skin	2	5	...	1
	Other Forms	...	...	...	...
Nervous System.	Epilepsy	9	19	4	13
	Chorea	11	13	10	14
	Other Conditions	25	52	10	18
Deformities.	Rickets	6	506	2	77
	Spinal Curvature	17	68	6	11
	Other Forms	34	227	21	60
	Other Defects and Diseases ...	251	544	113	143

B.—NO OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

GROUP.	NUMBER OF CHILDREN. Inspected.	NUMBER OF CHILDREN. Found to require Treatment.	Percentage of children found to require Treatment.
Code Groups—			
Entrants	10,453	688	6·58
Intermediates	11,366	1,025	9·01
Leavers	17,765	1,565	8·85
Total	39,584	3,278	8·28
Other routine inspections ...	...	...	...

TABLE III.—Numerical Return of all Exceptional Children in the Area in 1923.

			Boys.	Girls.	Total.
Blind (including partially blind), within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools.	...	...	...
		Attending Certified Schools for the Blind.	19	29	48
		Not at School	20	21	41
Deaf and Dumb (including partially deaf), within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools.	...	...	...
		Attending Certified Schools for the Deaf.	38	35	73
		Not at School	20	19	39
Mentally Deficient.	Feeble-minded.	Attending Public Elementary Schools.	...	...	...
		Attending Certified Schools for Mentally Defective Children.	1	...	1
		Notified to the Local Control Authority by Local Education Authority during the year.	7	5	12
		Not at School	229	161	390
	Imbeciles.	At School	...	...	...
		Not at School	65	40	105
		Notified during year	14	12	26
	Idiots.	Not at School	10	15	25
		Notified during year	2	2	4
Epileptics.		Attending Public Elementary Schools	...	...	147
		Attending Certified Schools for Epileptics.	3	...	3
		In Institutions other than Certified Schools.	...	...	...
		Not at School	...	...	25
Physically Defective	Pulmonary Tuberculosis.	Attending Public Elementary Schools.	37	53	90
		Attending Certified Schools for Physically Defective Children.	...	...	...
		In Institutions other than Certified Schools.	...	...	...
		Not at School	...	...	...
	Crippling due to Tuberculosis.	Attending Public Elementary Schools.	...	...	206
		Attending Certified Schools for Physically Defective Children.	...	...	...
		In Institutions other than Certified Schools.	...	...	...
		Not at School	...	...	...

TABLE III.—Continued.

			Boys.	Girls.	Total.
Physically Defective	Crippling due to causes other than Tuberculosis, *i.e.*, Paralysis, Rickets, Traumatism.	Attending Public Elementary Schools.	...	...	509
		Attending Certified Schools for Physically Defective Children.	17	11	28
		In Institutions other than Certified Schools.	...	...	...
		Not at School.	...	...	...
	Other Physical Defectives, *e.g.*, delicate and other children suitable for admission to Open-Air Schools; children suffering from severe heart disease.	Attending Public Elementary Schools.	...	...	245
		Attending Open-air Schools ...	...	...	...
		Attending Certified Schools for Physically Defective Children, other than Open-air Schools.	...	...	...
		Not at School	...	...	...

TABLE IV.—Return of Defects Treated during 1923.

Group I.—Minor Ailments (excluding Uncleanliness).

Disease or Defect.	No. of Defects treated or under Treatment during the year.		
	Under Authority's Scheme.	Otherwise.	Total.
Skin—			
Ringworm—Head	87	276	363
Ringworm—Body	41	30	71
Scabies	15	79	94
Impetigo	356	407	763
Other Skin Diseases	378	229	607
Minor Eye Defects	189	459	648
Minor Ear Defects	197	507	704
Miscellaneous	555	1129	1684
Total	1818	3116	4934

Group II.—Defective Vision and Squint.

Defect or Disease.	No. of Defects Dealt With.			
	Under Authority's Scheme.	By Private Practitioner or at Hospital.	Otherwise.	Total.
Errors of Refraction	1927	768	892	3587
Other Defect or Disease	148	79	...	227

Total number of children for whom spectacles were prescribed :—

(*a*) Under the Authority's Scheme 966
(*b*) Otherwise 2094

Total number of children who obtained or received Spectacles :—

(*a*) Under the Authority's Scheme 966
(*b*) Otherwise 1958

Group III.—Treatment of Defects of Nose and Throat.

NUMBER OF DEFECTS.				
RECEIVED OPERATIVE TREATMENT.			Received other forms of Treatment.	Total Number Treated.
Under the Authority's Scheme.	By Private Practitioner or Hospital.	Total.		
472	409	881	282	1163

Group IV.—Dental Defects.

(1) No. of children who were :—

(*a*) Inspected by the Dentist—

	Age			
Routine Age Groups	Age 5	322	Total ...	3486
	Age 6	398		
	Age 7	423		
	Age 8	433		
	Age 9	303		
	Age 10	273		
	Age 11	283		
	Age 12	514		
	Age 13	475		
	Age 14	62		

Specials 77

Grand Total 3563

(*b*) Found to require treatment 2993
(*c*) Actually treated 3777
(*d*) Re-treated during the year as the result of periodical examination 1194

(2) Half-days devoted to { Inspection ... 67; Treatment ... 668 } Total ... 735
(3) Attendances made by children for treatment 5754
(4) Fillings ... { Permanent teeth ... 1570; Temporary teeth ... 556 } Total ... 2126
(5) Extractions { Permanent teeth ... 1071; Temporary teeth ... 6088 } Total ... 7159
(6) Administrations of general anæsthetics for extractions ... 30
(7) Other operations { Permanent teeth; Temporary teeth } Total ... 1801
(8) Refused treatment 258

Group V.—Uncleanliness and Verminous Conditions.

(1) No. of re-visits paid to schools by School Nurses ... 3064
(2) No. of children examined at these re-visits 149851
(3) No. of children found unclean 6307